

AMERICAN INSTITUTE
OF
ARCHITECTS
SEP 5 1962
LIBRARY

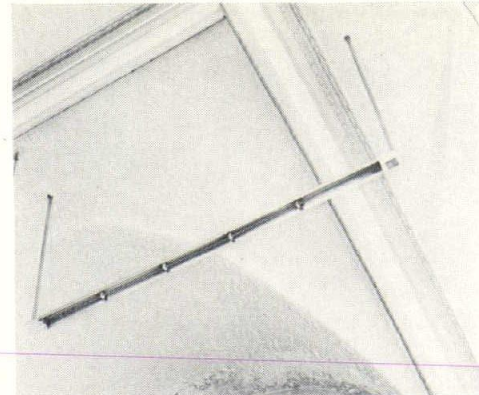


Indiana Architect

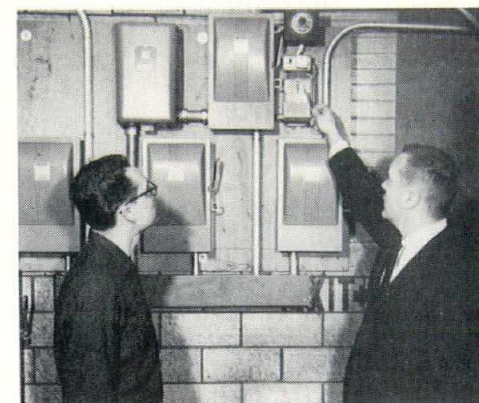
AUGUST, 1962



Avionics, Inc., South Bend



Infrared electric heaters



Well-planned service entrance

Avionics of South Bend Goes All-Electric; Provides Ideal Skilled Work Environment

Avionics, Inc., a South Bend electronics manufacturer, elected to go Total-Electric when they re-modeled a former bank building for their operations. No other energy source could do the job by itself—none was flexible enough to meet all of Avionic's needs so economically.

Whatever the operation—in new building or old—electricity can be the single energy source to help do the job better. In such a Total-Electric factory, planned electrical applications of space conditioning, process heating, lighting, wiring, and materials handling are speeding production, meeting schedules, and improving product quality.

From lobby to loading dock, electric units for comfort conditioning can maintain proper temperatures, regardless of the weather. In summer, plant air-conditioners or ventilating fans cool. In winter, a dozen shapes, sizes

and types of electric resistance heating units are available to heat. With the electric heat pump, both heating and cooling is provided—automatically.

Electricity is ideal for all sorts of processing. Electric heat answers every need with its speed, wide temperature range, and accurate control. This unexcelled performance of electric heating equipment increases the efficiency of countless processing methods. It pays for itself in greater profits.

Planned lighting helps to provide uniformity of finished product in manufacturing plants. It also minimizes rejects, improves craftsmanship and increases safety.

Adequate electric wiring throughout the plant is essential to safe, continuous productive operations. Proper wiring will assure proper voltages, electrical distribution, and uninterrupted service.

Materials handling is speeded with

a wide variety of electrical applications. Conveyors and other equipment save time and work—free labor for more productive tasks at other jobs in the plant.



In comfortable, electrically heated plants, and with proper lighting, skilled workers are more able to produce a product of highest precision. Here, an Avionics technician performs an important operation with great accuracy.

Write or Call



INDIANA & MICHIGAN
ELECTRIC COMPANY

An Investor-Owned Public Utility

AMERICAN ELECTRIC AEP® POWER SYSTEM

For Information!

TO THE POINT

CROSSES OF THE AGES; DESIGN AIDS FOR YOU

Christianity's Sacred Symbol—the cross—has been pictured in over 140 of its variations in a new booklet published for architects by Overly.

Entitled "*The Cross*," the new booklet is a product of over five years of research. It separates the cross designs according to their time of origin and includes a historical review of their religious significance and usage.

A separate section catalogs all of the basic cross forms, including crosses from the ancient civilizations, crosses from the early church and the crosses from heraldry. Additional information is offered on how Overly crafts these religious symbols and the important data the architect needs to know when ordering a cross.

These cross designs will be useful to architects in designing church interiors, in selecting the altar cross or in providing external ornamentation for contemporary religious buildings.

"*The Cross*" is available to all architects on letterhead request. Send for your copy today.

* * *

Another U/L Testing Breakthrough has been achieved by Overly in the recent fire test of a pair of Overly doors, 7' x 7' in size, for a U/L "A" label of 3 hours of fire resistance. These larger doors use new Von Duprin Concealed Fire Exit Hardware, giving the architect U/L labeled doors a full foot wider than heretofore available with the aesthetic advantage of concealed hardware. For more information, write to Manager of U/L Labeled Products, Overly Manufacturing Company.

Overly

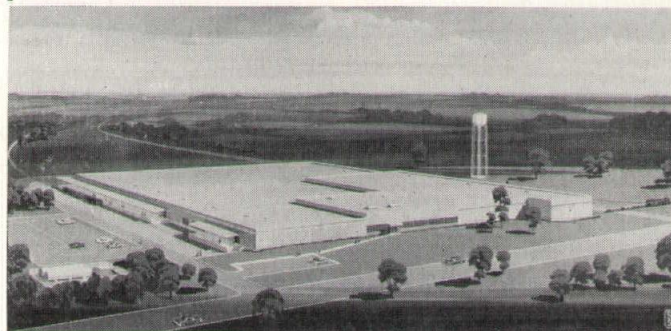
Greensburg, Pennsylvania • Los Angeles 39, California

Overly Representative In Your Area:

HUGH J. BAKER & COMPANY

602 West McCarty Street
Indianapolis 6, Indiana

Steel Aluminum Enamel Building Products



FRANKLIN MANUFACTURING CO.

Bloomington, Ind.

Architect — Lennox, Matthews
Simmons and Ford, Inc.

The following products furnished by
Architectural Building Products Co.

Engineered to Meet Exacting Specifications

**Serving Schools . . . Public Buildings
Churches . . . Commercial Buildings**

ALUMINUM and STEEL

CURTAIN WALL and WINDOW WALL

ALUMINUM and PORCELAIN FACIAS

SKY DOMES, PLASTIC MATERIALS

PORCELAIN ENAMELED PANELS

ALUMINUM and STEEL CANOPIES

TOILET PARTITIONS

FORMED ALUMINUM and STAINLESS STEEL

• WINDOWS—Federal Steel Company

Unit Erection and Installation Provided
By Factory Trained Erectors

Architectural Lou Carner,
Pres.
Building Products Co.

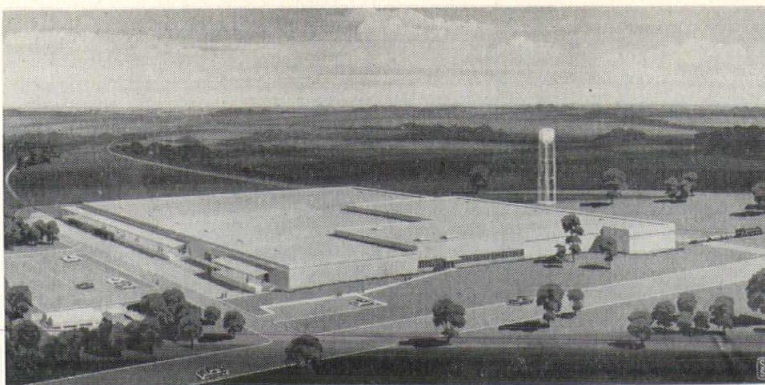
1433 N. Meridian St.,

Indianapolis, Indiana

ME 4-8351

Franklin Manufacturing Co.
Bloomington, Ind.

*Protected By a Universal
Tank and Iron Works
Elevated Sprinkler Tank—
100,000 Gallons Capacity*



Our Avon Plant Produces Steel Fabrication and Erection to Meet
Purchaser's Needs. Rolling, Forming All Shapes, Cutting and
Welding Ferrous and Non-Ferrous Metals — Pressure Vessels
National Code Stamped.

COMPLETE TANK SERVICE

UNIVERSAL TANK AND IRON WORKS

1129 UDELL STREET

INDIANAPOLIS 23, INDIANA

Air Conditioned by Economical GAS



Employees work in cool comfort in the new offices of the Daily Herald-Telephone, Bloomington newspaper. Completed in 1961, the building uses a gas-fired boiler to supply high temperature hot water for heating and also for a 140-ton absorption air conditioning unit which cools the entire building.


*Save on Equipment Maintenance, Save on Operating Cost—
Specify GAS for Year Round Comfort*

For specific information regarding types and
sizes of equipment, gas rates, engineering data
and list of users, call or write . . .

AIR CONDITIONING DIVISION

Ind. Gas & Water Co., Inc.

1630 N. Meridian Street, Indianapolis, Ind.

INDIANA GAS  **and WATER
COMPANY, INC.**

LIVE MODERN, FOR LESS, WITH GAS

Indiana Architect

Official Journal, Indiana Society of Architects
and the Northern Indiana Chapter, both Chapters
of The American Institute of Architects

Vol. VI

AUGUST, 1962

No. 4

The Indiana Architect is the sole property of the Indiana Society of Architects, AIA, and is edited and published monthly in Indianapolis by Don E. Gibson & Associates, 3637 N. Meridian Street, P. O. Box 55594, Indianapolis 5, Indiana.

Current average monthly circulation, 3,400, including all resident Indiana architects, school officials, churches and hospitals, libraries, selected public officials, and members of the Indiana construction industry. Further information available on request.

Member, Publishers Architectural Components

16 Affiliated Official Publications of Components of The American Institute of Architects, in 26 key states. Advertising and Listing in Standard Rate and Data Service, Headquarters, 120 Madison Ave., Detroit 26, Woodward 1-6700. Eastern Office, 18 E. 56th Street, New York 22, N.Y., Plaza 5-3180.



Editor and Publisher Director of Advertising

Don E. Gibson, Hon. ISA Assoc.

William E. Stineburg

Officers and Directors, Ind. Society of Architects

President

WALTER SCHOLER, JR., AIA
Lafayette

Vice-President

ALFRED J. PORTEOUS, AIA
Indianapolis

Secretary

CHARLES J. BETTS, AIA
Indianapolis

Treasurer

IVAN RAY DAHLGREN, AIA
Fort Wayne

Directors

EDWIN C. BERENDES, AIA
Evansville

ALFRED J. PORTEOUS, AIA
Indianapolis

ROBERT O. RITZ, AIA
New Albany

CARL L. BRADLEY, AIA
Fort Wayne

HARRY E. HUNTER, AIA
Indianapolis

RALPH ROBERT KNAPP, AIA
Evansville

RAYMOND W. OGLE, AIA
Indianapolis

WALTER SCHOLER, JR., AIA
Lafayette

MURRAY P. YEAGER, AIA
Terre Haute

Executive Secretary
DON E. GIBSON, Hon. ISA Assoc.
Indianapolis

Immediate Past President
WAYNE M. WEBER, AIA
Terre Haute

Officers and Directors, Northern Indiana Chapter

President

PAUL FRANK JERNEGEN, AIA
Mishawaka

Vice-President

COURTNEY E. ROBINSON, AIA
Fort Wayne

Secretary

VITO A. GIRONE, AIA
South Bend

Treasurer

LLOYD W. MASS, AIA
South Bend

Directors

WILLIAM G. RAMMELL, AIA
Fort Wayne

RICHARD L. WILDERMUTH, AIA
Gary

ROBERT J. SCHULTZ, AIA
Mishawaka



Howard Vending Machine

Specified an A-J

FIBERGLAS/GYPSUM

Roof Deck & Fiberglass
Acoustical Ceiling because—

1. Fire Safety
2. Sturdy Construction
3. Pleasing appearance
4. Economical
5. Easily Maintained

Service & Installation by

ANNING-JOHNSON Company
INCORPORATED

1720 ALVORD STREET

WAlnut 3-2461

INDIANAPOLIS 2, INDIANA

Branch Office: 1272 Maxwell Ave. Evansville HA 3-4469

PLEXTONE® Color- Flecked Enamel Specified for these Plants —

URSHAL LABORATORIES

Valparaiso, Ind.

OUR SUNDAY VISITOR

Huntington, Ind.

NEWS SENTINAL

Ft. Wayne, Ind.

WESTERN ELECTRIC

Indianapolis, Ind.

Distributed By

PERFECTION PAINT & COLOR

715 E. MARYLAND
INDIANAPOLIS, IND.

NEWS FOR YOU FROM LIGHT WEIGHT AGGREGATE CORPORATION:



**Have you heard about
DUO-WIRE masonry wall reinforcement?
...here's the how and why of it.**

In our constant contact with architects, blockmakers and masons, we discovered that there was a need for better masonry wall reinforcement; particularly one that was economical and readily available in a variety of dimensions.

Such reinforcement was then being manufactured in Phoenix, Arizona, by David Wright, son of the late Frank Lloyd Wright.

With Dave Wright's help and guiding hand, the same better reinforcement is now being produced in Michigan. It is called DUO-WIRE and has characteristics which enable you, as an architect or engineer, to specify it with confidence...

high tensile strength, dimensions to fit any wall thickness, A. S. T. M. and Corps of Engineers compliance.

DUO-WIRE is sold by local concrete products manufacturers... the most natural source of supply for the mason contractor.

Full details and specifications concerning DUO-WIRE should already have reached your office. If not, a phone call or postcard will bring them to you.



LIGHT WEIGHT AGGREGATE CORPORATION

THE ONLY EXPANDED CLAY AND SHALE AGGREGATE MANUFACTURER IN MICHIGAN

12720 Farmington Road • Livonia, Michigan • Garfield 1-6565 • Kenwood 3-3379

MEMBER, AMERICAN CONCRETE INSTITUTE, CONCRETE IMPROVEMENT BOARD, CONCRETE PRODUCTS ASSOCIATION OF MICHIGAN, CONSTRUCTION SPECIFICATIONS INSTITUTE, EXPANDED CLAY AND SHALE ASSOCIATION

**General
Contractor
for
GENERAL
ELECTRIC
TUBE PLANT
OWENSBURG, KY.**

+ +

**HARTZ-
KIRKPATRICK
CONSTRUCTION CO., INC.**

OWENSBURG, KENTUCKY

P.O. BOX 1328

**Glass and
Glazing
Contractor
for -**

**FRANKLIN
MANUFACTURING CO.
BLOOMINGTON, IND.**

By

**CAPITAL
GLASS CO.**

432 S. Missouri

Indianapolis

Indiana

ME 5-1301

Gary Student Wins Scholarship

David Sweet, a 1962 graduate of Gary's Edison High School, won out over some fifty entrants in the first annual Scholarship Program sponsored by the Indiana Society of Architects. He will use the five-year, \$500.00 per year grant to study architecture at the University of Illinois.

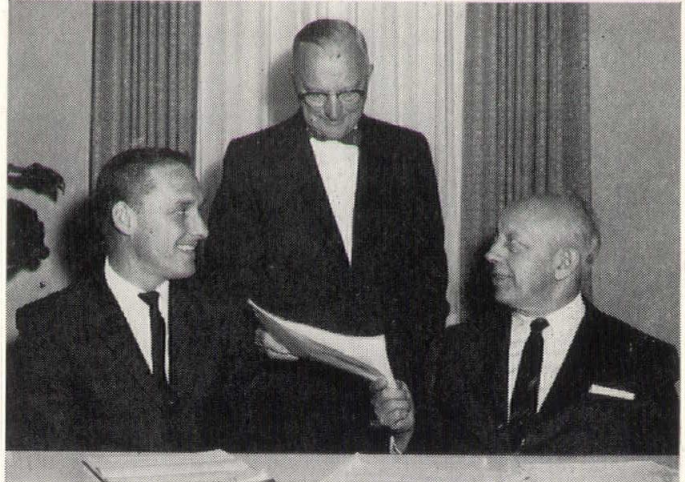
Dave is the son of Mr. and Mrs. Calvin Sweet, 379 Durbin Street, Gary; his father is in the retail lumber business. A varsity athlete, Dave played on his school's championship football team and also participated on the varsity golf team. He was a member of the Student Council, the Science Club, Camera Club, Dramatic Club, and Letterman's Club.

One of four children, Dave decided to prepare for the architectural profession while a freshman in high school. He has two older sisters, one a high school teacher and one studying elementary teaching at Ball State. His younger brother is considering studying engineering at Purdue.

The first alternate selected by the judges was Kenneth Jones, of Crawfordsville, and the second alternate was James J. Walters, of Elkhart. Other finalists were Charles Brenner of Walkerton, and James Ragsdale, of Indianapolis.

Judges for the first scholarship program were Mr.

George Caleb Wright, FAIA, chairman; James O. Johnson, AIA, Anderson architect; and Dr. I. Lynd Esch, president of Indiana Central College.

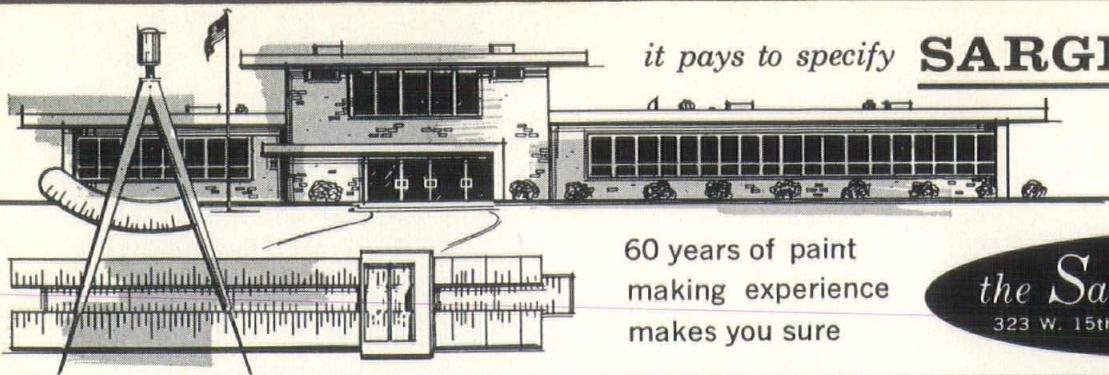


James O. Johnson, AIA, George Caleb Wright, FAIA, and Dr. I. Lynd Esch, president of Indiana Central College, (l. to r.) served as the panel of judges for the first annual ISA Scholarship Program.



Finalists in the ISA Scholarship Program were (l. to r.): James A. Ragsdale, Indianapolis; James J. Walters, Elkhart;

David Sweet, Gary (this year's winner); Charles F. Brenner, Walkerton; and Kenneth W. Jones.



it pays to specify **SARGENT® PAINTS**

See for yourself . . . how Sargent paint products more than fill the bill for consistent quality . . . for commercial or private application.

60 years of paint
making experience
makes you sure

the Sargent-Gerke Co.
323 W. 15th ST., INDIANAPOLIS, INDIANA

For Sale

Wood horizontal plan files, drawers
2" deep, 29" x 39½" x 83" high
stack, 29" x 39½" x 63" high
stack

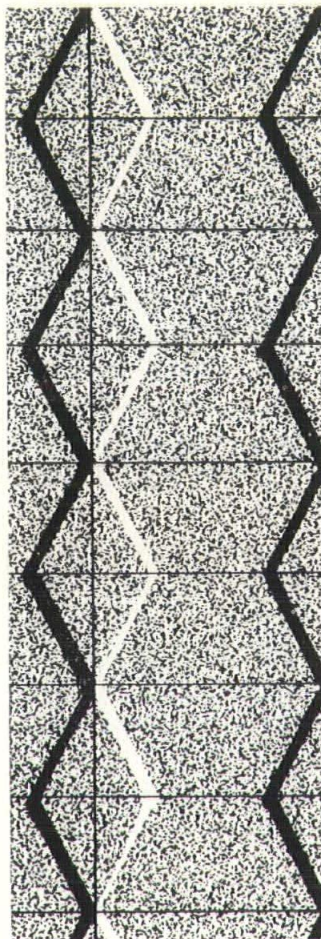
also

Two vertical plan files, one wood
and one metal

Surplus Items Now In
Storage

FOR SALE BY ARCHITECT

Write: Box 11A, Indiana
Architect, 3637 N. Meridian,
Indianapolis



FOR

Quality

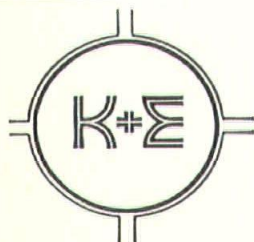
BUILDING MATERIALS

CALL

Schuster's

824 E. TROY AVE.

STate 6-4351
INDIANAPOLIS, INDIANA



Exclusive

K+E DEALER

DRAFTING
SURVEYING
REPRODUCTION

SUPPLIES

- Blue Prints • White Prints • Photo Copies
- Offset Printing

MARBAUGH Engineering Supply Co.

INDIANAPOLIS, IND.

MAIN OFFICE — 140 E. Wabash St.

NORTHSIDE BRANCH — 4145 N. Keystone Ave.

MEIrose 7-3468

LIberty 6-4875

Facts About Architecture

By JOHN MOSELE, Freshman,
Carmel High School

"Architecture is the art and science of building." As a science, architecture must provide shelter and comfort for man's activities in the most practical and essential way. As an art, it must express the spirit, the sense of beauty and the hopes of the people who live, work, play or worship in it. Architecture determines the way of life for all people. A good commercial building improves business, a well designed church encourages worship, a well planned home provides better living for the family living in it.

Construction is the biggest single industry in the United States. Last year construction topped fifty billion dollars. Within the next ten years the people of the U. S. are to spend \$600 billion for construction purposes. In the next forty years, we will have to double every building in the country to house the population which will nearly double.

THE ARCHITECT'S WORK

"The architect is the leader of America's building team." He is the "Master Builder." The work of the architect is not only to draw the plans for a building, but to do a mountain of other things. Here are only a few: He must study natural and human environment, he must be thoroughly acquainted with the function the building must serve. This requires study, research, and a close touch with the client. An architect's duties to his client are usually classified into four stages.

A FORWARD

By ALFRED I. PORTEOUS, AIA

One of the prime objectives of our profession is to better inform the public of our role in society. Another important endeavor is to attract the most capable of our young people so that they choose architecture as their life work. These are two main aims of our Scholarship program.

An example of the progress being made along each of these two lines is the following essay. It was written last May by John Mosele, a fourteen-year-old freshman at Carmel High School. It was a two-week assignment in his Orientation Class. He received a very high mark on this work.

John's very sincere interest in architecture is due, partially, to the fact that his cousin is studying architecture at the University of Miami, Coral Gables, Florida. His interest was developed further when he accompanied twenty-five other boys on a tour of the City-County Building last spring. John is the son of Arthur P. Mosele, principal of the Indiana State School for the Blind.

In the first or "Schematic Design," the architect discusses with the client to determine the scope of the project: discuss the purpose, the general plan and design, location, construction, mechanical equipment, discusses the time needed to build such a structure, the approximate cost and means of financing. He also does such things as visit the site and study project placement, recommends methods of operating the project for its purpose, studies laws, ordinances, codes, standards, rules, and requirements of insurance carriers. The architect prepares schematic design studies of the building in relationship to the site.

The following services of the second stage (Design Development) are usually rendered by the architect upon the client's approval of the schematic design data: First the architect restudies the design and prepares illustrations showing the plan and site development and makes recommendations as to type of construction materials and mechanical equipment. Next he prepares an outline of specifications and revises the statement of probable cost, if necessary.

The following phase — the construction document — is rendered when the client has approved of the design. The architect develops preliminary drawings into working drawings. He includes with these drawings all essential improvements whether it be architectural, structural, plumbing, heating, electrical, other mechanical, or site. He also prepares the general conditions of the contract. The architect must specify the type and quality of material. He must also prepare bidding forms and furnish the agreed number of drawings.

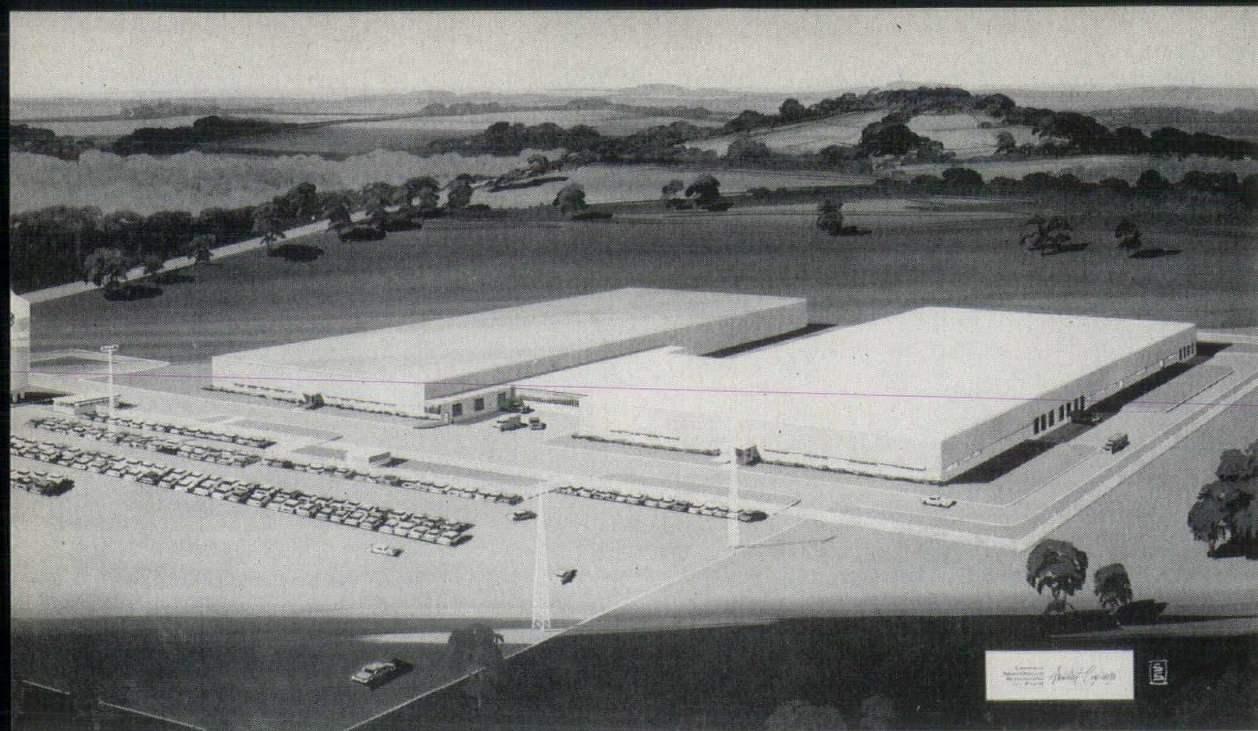
During the last stage the "Construction Phase," the architect does such things as advise his client on the qualifications of perspective bidders, advise the client regarding the cost of a full-time project inspector, makes inspections of the construction at different times. He must also see that the guarantees are delivered to the client and the contracts have been fulfilled. This ends the service that the architect renders for pay; there are many more which he does not include in his fees.

SPECIAL ABILITIES

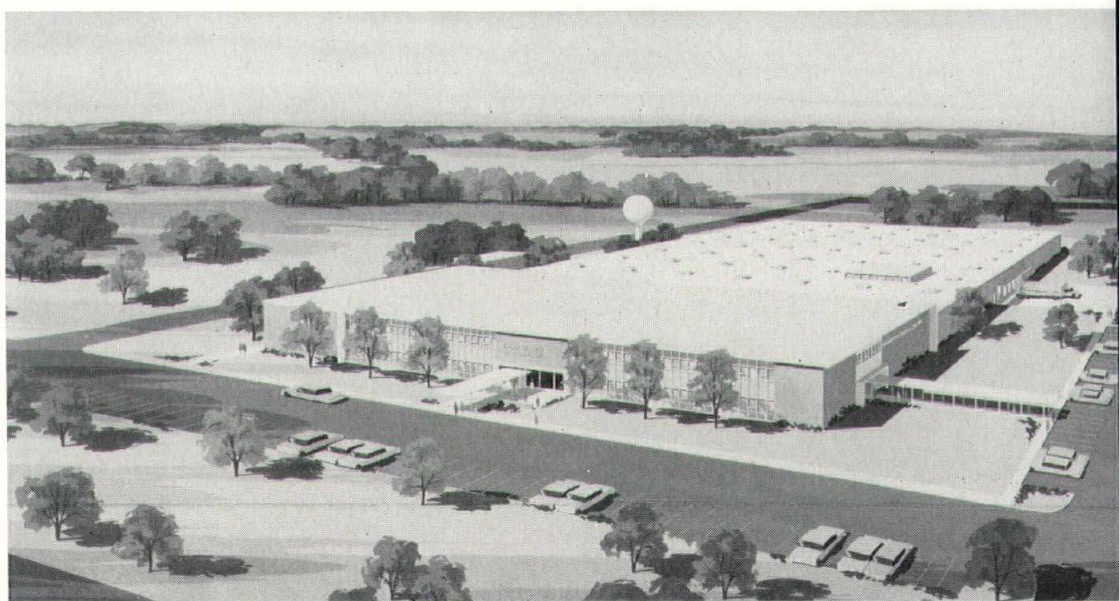
To become an architect a young man should have these abilities:

- 1) He must be able to draw. An architect doesn't need to be a Rembrandt but he must be able to sketch neatly and accurately.
- 2) He must be able to visualize. He should be able to describe in words and

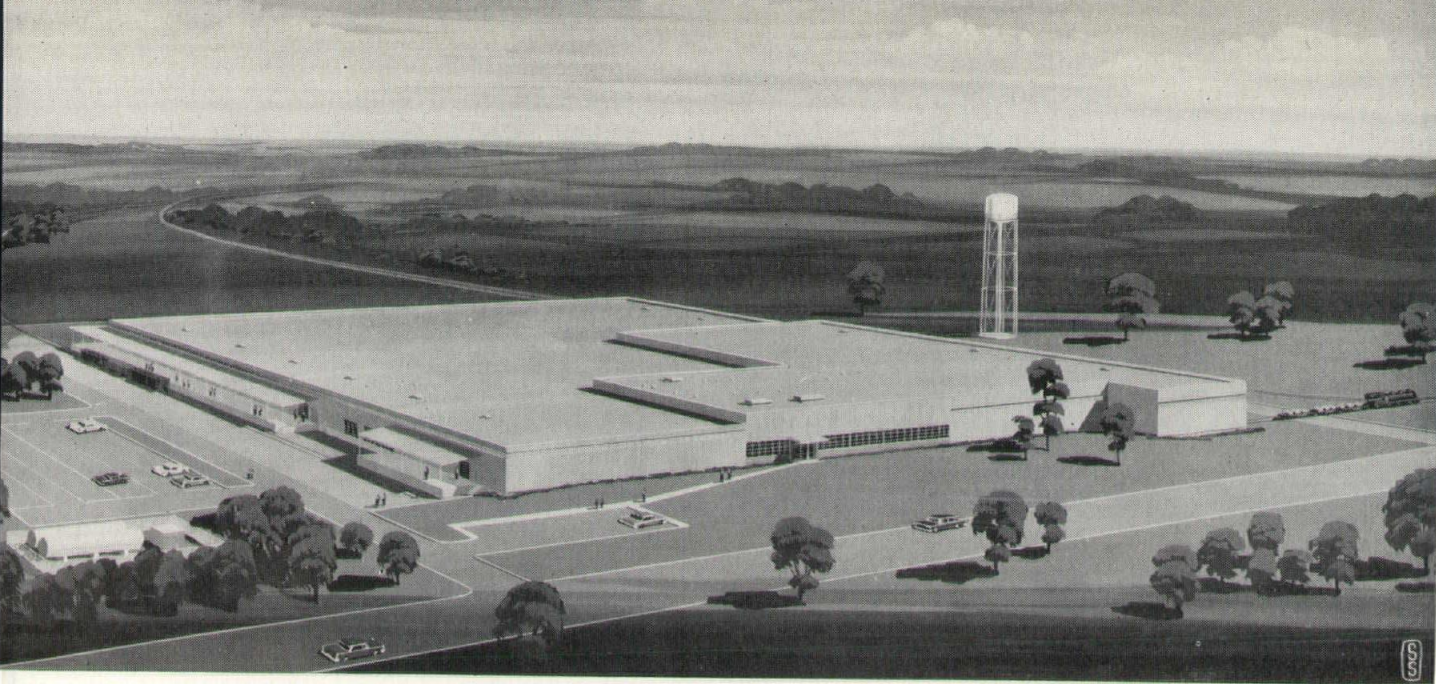
(to page 17)



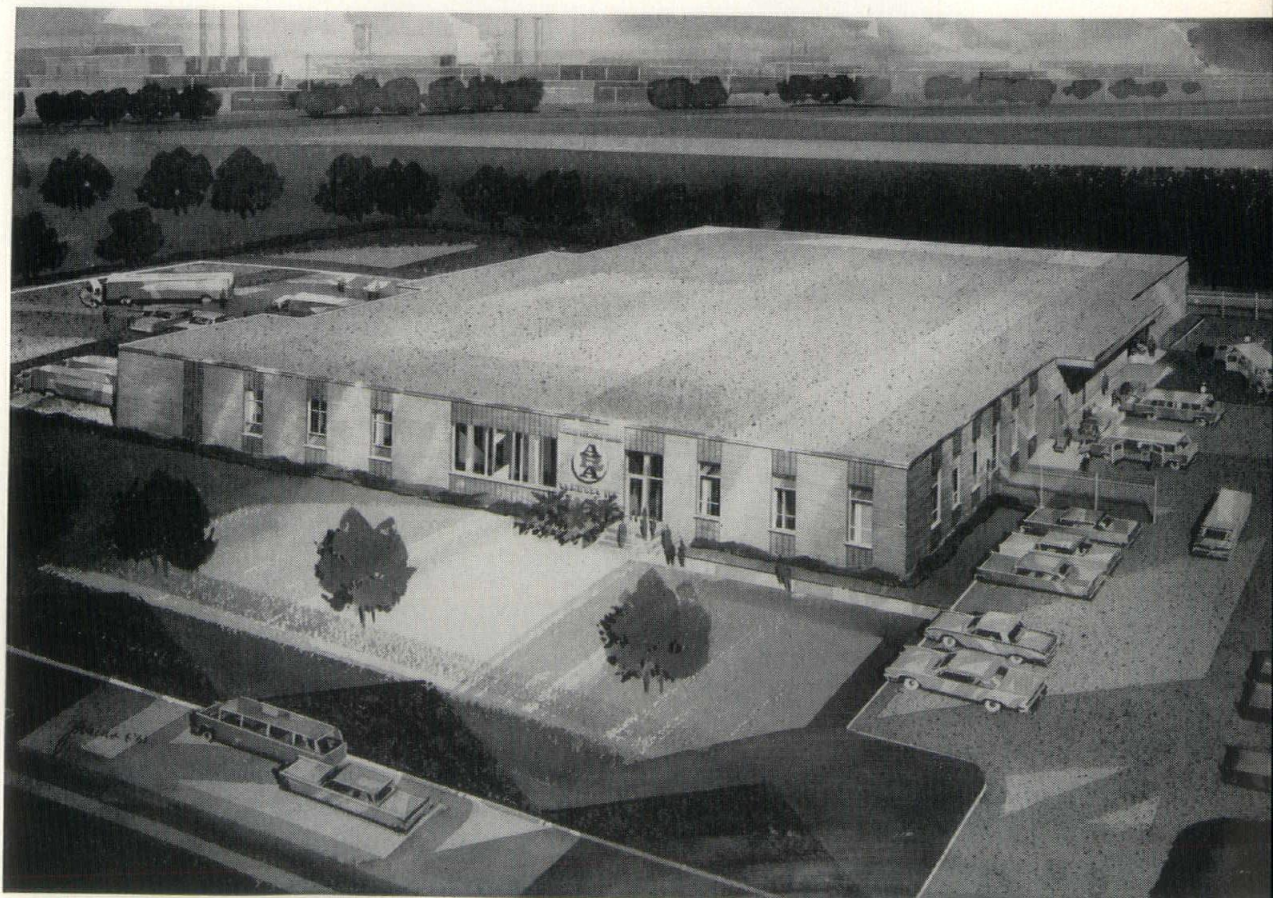
*GENERAL ELECTRIC TUBE PLANT — Owensboro, Ky.
 Architect: Lennox, Matthews, Simmons and Ford, Inc.
 General Contractor: Hartz & Kirkpatrick*



*HOWARD W. SAMS & CO., INC. — Indianapolis, Ind.
 Architect: James Associates
 General Contractor: Wm. P. Junglaus Co., Inc.*



*FRANKLIN MANUFACTURING CO. — Bloomington, Ind.
 Architect: Lennox, Matthews, Simmons and Ford, Inc.
 General Contractor: Huber, Hunt & Nichols, Inc.*



*HOWARD VENDING — Indianapolis, Ind.
 Architect: Donald D. Dick
 General Contractor: Charles C. Brandt Co., Inc.*

LOOK UP TO A PERMANENT CEILING OF GENUINE **LATH and plaster**



CEILINGS OF LATH AND PLASTER PROVIDE —
ECONOMY OF FIRST COST • FIRE SAFETY •
EASE OF MAINTENANCE • CHOICE OF PLASTER FINISH •
INVESTIGATE — SPECIFY — DEMAND
DURABLE CEILINGS OF LATH & PLASTER

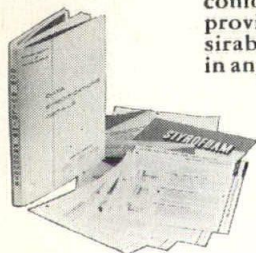
Lathing & Plastering Bureau of Indianapolis, Inc.

BUSINESS MANAGER: Walter J. Strough, 130 Winona Dr., Carmel, Ind., Victor 6-5394

... chemically engineered building products
of The Dow Chemical Company

SARALOV 400®

An elastic sheet flashing that conforms to any contour and provides a combination of desirable properties not found in any other flashing material.



If you do *not* have a Dow Building Products File drop us a card or call our nearest office — no charge or obligation. This file is a collection of factual information and drawings to aid in design and specifications.

STYROFOAM®

A superior thermal insulation for general building requirements such as perimeter, cavity wall, plaster base insulation and low temperature space.

ROOFMATE®

A new water-proof roof insulation eliminates need for vapor barriers and water cut-offs. This dry insulation eliminates a major cause of blistering.

REGIONAL SALES REPRESENTATIVES

SEWARD SALES CORPORATION

INDIANAPOLIS, INDIANA
1101 East 46th Street
Phone CL 3-3239

ELKHART, INDIANA
740 S. Main Street
Phone 2-4717

CINCINNATI, OHIO
3660 Michigan Street
Phone East 1-4140

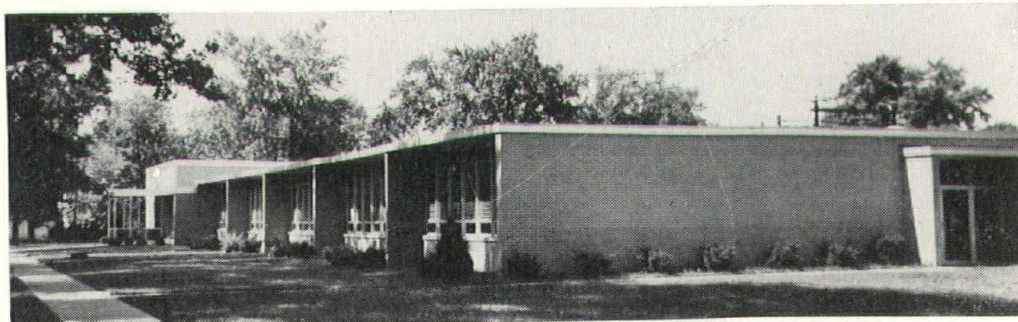
Again, Architects Specify *Flameless* ELECTRIC HEATING

Here is another example. Architects are specifying safer, cleaner, more dependable electric heating in modern schools, churches, hospitals and

commercial buildings. Flameless electric heating is practical for home use, too. See us today for complete details!

Central Elementary School,
Clinton, Indiana. Architect:
Miller, Vrydagh & Miller,
Terre Haute.

Completed in 1959, this modern school is heated entirely with flameless electricity. Operating costs have been most satisfactory with safer, cleaner electric heat.



--PUBLIC SERVICE COMPANY OF INDIANA, INC.--

Observations On Industrial Architecture

SITE PLANNING

For no other type of building is site planning more essential. Generally some use, either present or future, or both, should be assigned to every part of the site.

First consider the approach to the building or group of buildings. Who will see the plant from this point of view? Will it inspire enthusiasm and improve morale in employees? Will visitors be favorably impressed? Will it serve as effective advertising as viewed by passers-by? It need not be a large area, but if skillfully planned, a forecourt may be a relatively inexpensive means of giving distinction to the over-all design.

Unenclosed work areas must be planned in relation to the building plan. This is also true for interior courts, and possibly for recreation areas and provision for expansion.

Parking areas should be as close to building entrances as possible and directly accessible to the highway. They should be concealed as much as possible. It is preferable to separate access roads to trucking areas from those to parking areas.

FACTORY DESIGN

It is recognized that neither the architect nor his client may be a single individual, but it is assumed that one person will represent and serve as coordinator for the architectural firm and that one person (the one addressed in the following statements) will act for the manufacturing corporation.

Before your architect can plan your building, you must give him as much information about your present plant and your needs as possible. Perhaps the architect should talk directly with managers and foremen. If you have an industrial engineer, he and your architect should cooperate from the beginning. Planning might start with an ideal routing diagram, drawn to scale. Various modifications may be considered which can be accommodated to building forms. Designs should be compared for efficiency and cost of construction. A pleasant orientation and outlook should be secured for cafeteria and recreation areas. Spaces for needed air-conditioning and other mechanical equipment should be included.

(Excerpts from the AIA Building Type Reference Guide (BTRG), by Clinton H. Cowgill, FAIA, Head of the Department Office Practice, The American Institute of Architects, with the collaboration of H. E. B. Anderson, Construction Editor of PLANT ENGINEERING).

When a schematic design has been approved, the plan of each floor should be studied by your architect at larger scale, and sections and elevations should be drawn. At this stage the structure must be determined and each system of plumbing, heating, airconditioning and electric wiring worked out. If the design is based upon a planning module, it will be advantageous to all concerned. Outline specifications should accompany the design. If there is doubt at this stage about relation of the construction cost to the budget it would be wise to order a detailed estimate.

Even though one person may be designated to act for the client, he may well be the spokesman for a group. The regular position held by this person and the positions held by other members of the group will vary for different projects. In many cases, the Plant Engineer will be the logical choice for spokesman. The group should generally include one or more representatives of top management, perhaps one or more representatives of the corporation's headquarters engineering office (if any), and heads of important departments concerned with operations and maintenance. The architect may benefit by direct contact with foremen and other workmen, but his instructions should be given by the designated spokesman representing the client.

WORKING DRAWINGS AND SPECIFICATIONS

With assurance concerning cost, you may want your architect to proceed with all possible speed to get the building under way. Normally, from several months to a year should be allowed for the preparation of the construction documents, but if desired the construction could be started before working drawings and specifications have been completed. A separate lump sum contract possibly could be let for excavation and foundations, or this part of the project could be let on a cost-plus-fee basis.

If all questions have been settled during the design stages, the preparation of construction documents will be facilitated by a policy of non-interference by the owner or his representatives. On the other hand, if questions arise, they should be answered promptly. Frequently reports to the owner should be made by the architect.

The "architectural set" of working drawings should indicate the materials and structural elements needed to produce the building illustrated by the design drawings. If available, materials and building components should be chosen which fit a modular grid (a multiple of four inches), and dimensions should be related to this simple modular pattern.

(to page 15)

GLOBE-WERNICKE

Echelon



Purford's

OFFICE INTERIORS

603 E. Washington St. MEIrose 5-7301

W. E. BROADY & SON, INC.

2115 Martindale Ave

WA 5-4261

Indianapolis, Ind.

Commercial and Industrial

**BRICK - BLOCK - STRUCTURAL
GLAZED TILE - STONE**

MASONARY CONTRACTOR

FOR

**Howard Vending Machine
Corporation Building**

Excavating & Grading

Bituminous Paving

For The

**Franklin Manufacturing
Plant**

BY

RALPH ROGERS & CO., INC.

Ready-Mix Concrete

FURNISHED BY

ROGERS BUILDING SUPPLIES INC.

BLOOMINGTON
INDIANA

GENERAL CONTRACTOR

FOR

**Howard Vending
Machine Corporation
Building**

**Charles C. Brandt
Co., Inc.**

1505 MASS. AVE.

ME 7-3367

INDIANAPOLIS
INDIANA

Industrial Architecture

(from page 13)

The "structural set" of working drawings is coordinated with the "architectural set," and the "mechanical sets," (heating, air-conditioning, electrical and plumbing) are coordinated with each other and with both the "architectural sets" and the "structural set." Specifications are furnished for all branches of the work. The working drawings and specifications are used by bidders for estimating, by the architect and engineers as a guide for the administration of construction, and by contractors as detailed instructions to their suppliers, sub-contractors and workmen.

SITE ENGINEERING

When an industrial plant occupies a large site, engineering problems may present themselves both in the early stages of design and later. Consideration must be given to the topography of land adjacent to the site, to access from highway, railway or other means of transportation, and to the availability and adequacy of water, gas, steam, and sewer lines. If a sprinkler system will be required, the placing of an elevated tank should be considered at the outset; and if power is to be generated, the placing and design of the power plant must have early consideration. In determining final grades, original grades should be disturbed as little as possible. Grades should be steep enough for drainage.

Many plant engineers have reported difficulties with drainage. The architect should ask for and receive complete information concerning the site. The natural surface drainage should be maintained if possible. Buildings on swampy ground may require waterproofing of floor on ground and underfloor ducts.

For heavy machines, special foundations may be indicated. Rock sounding or borings and soil analysis may prevent future trouble.

ADMINISTRATION OF CONSTRUCTION

When the working drawings and specifications are complete (or before), it may be necessary to carry-on some of the manufacturing operations while parts of the building are being constructed. By doing so inevitably results in increased costs for both production and construction. However, when there is no alternative it may be best to let a construction contract on the cost-plus-fee basis or do the work with

company employees. In the latter case, a capable construction superintendent should be secured to work under the direction of the architect.

When the occupation and use of the various parts of the plant can await completion of the construction, it is advantageous to let the construction contract to the low bidder among carefully selected contractors. With complete construction documents prepared by the architect (who must be unbiased) the client is assured of the greatest value for the lowest cost, and he knows how much he is paying for the construction and for professional service. When the functions of the architect are combined with those of the builder, it may be difficult to learn how much is paid for professional service.

One of the first duties of the architect, after construction contracts have been let, is to establish standards for the contractor. Even with exact specifications, the contractor may be uncertain as to the acceptability of questionable materials and workmanship. For the contractor to set up his own standards obviously results in conflicts of interest causing embarrassment to the contractor and possible loss to the owner. Once the architect has established standards, they are usually enforced by a project inspector under the direction of the architect.

The producers of many building materials and appliances and some subcontractors make drawings for use in their own shops. These shop drawings are required for most non-standard building components. While these should be checked first by the contractors involved, they should also be checked by the architect to make sure that his drawings have been correctly understood and followed.

Another duty of the architect soon after work has started is the consideration of the contractor's proposed schedule of progress, indicating when the various parts of the work will be started and completed and when certain materials and appliances are to be delivered. At the same time, the architect should consider the contractor's schedule of values, which indicates the value of materials plus overhead plus profit) of each of the various parts of the work. He must see that the allowance for overhead and profit, etc., is not significantly greater for those parts of the work which are done in the early stages than for those which come later. The schedule of values is commonly the basis for progress payments made to the contractor. These payments conform to the amounts certified by the architect as due and payable.

(to page 18)

15

Good Lumber Imported & Domestic Hardwoods
Fine Custom Millwork Pre-assembled Components
BURNET-BINFORD LUMBER CO.

1401 West 30th St.

8502 Westfield Blvd., Nora, Ind.

Wa. 6-3315

PERSONNEL NOTICES

WANTED: Experienced and qualified architectural draftsmen for several central Indiana architectural firms. Also, some openings for qualified architectural drafting trainees. Contact the Indiana Society of Architects, P.O. Box 55594, Indianapolis 5.

WANTED: Architect or man with architectural experience to take charge of contract sales division of central Indiana firm; duties include designing and making equipment layouts, liaison between factory and consumer, promotion of special equipment, and working with field representatives. Some travel required; those with management abilities given preferential consideration.

For information, contact Box 790, INDIANA ARCHITECT, 3637 N. Meridian St., Indianapolis.

QUALITY
FLUORESCENT LIGHTING
FIXTURES
FOR

SCHOOLS
OFFICES
STORES
FACTORIES

**LOUISVILLE
LAMP CO., INC.**

LOUISVILLE 3, KENTUCKY

FOR QUICK SERVICE
CALL JU 7-6094

INDIANA REPRESENTATIVE

JOHN G. LEWE

H. H. (SANDY) HOMAN

THE H. H. HOMAN CO.

COLUMBIA WOOSTER BLDG.

ROOM 107

CINCINNATI, 27, OHIO



**BUILD WITH SPEED
and ECONOMY...USE**

DOUBLE TEE SLABS

**Manufactured by the
PRECAST DIVISION**

General Dredging Co., Inc.

Precast concrete Double-Tee slabs are speedily erected at the job site, provide immediate cover for the job, and furnish a working deck. This fire-safe material reduces insurance costs. Specify Double-Tee slabs for quick delivery.

Please write or phone
Ralph W. Walb
President
General Dredging Co., Inc.
2200 LaFontain St.
Fort Wayne, Indiana
Phone: Anthony 1453

**Residential and
Commercial**

SWIMMING POOLS



Compare Quality and Price!

We will show you all sizes and shapes to fit your requirements.

*Oldest and Largest Pool Builders
in Indiana*

Quality Pools by

JAMES Construction Co.

Charter Member of the National Swimming Pool Institute

LI berty 5-0990

2321 N. Emerson Indianapolis

Facts About Architecture

(from page 9)

drawings, buildings which he has seen.

- 3) He must be good in mathematics and technical subjects. An architect must be a good engineer, a small mistake could cause a skyscraper to collapse.
- 5) He must have a grasp for dimensions. An architect must have a good eye for the size and shape of things.
- 5) He must have a feeling for what is appropriate. He would not design a train depot looking like a gas tank.
- 6) He must be able to synthesize. He must be able to cope with a variety of information and come up with the right solution.
- 1) He must be persevering. It takes a great amount of detail work to develop the plans for a building.
- 8) He must be able to work under pressure. The work of an architect comes in spurts and it is not uncommon for an architect to work 16 to 18 hours a day.
- 9) He must be a diplomat. He must be able to sell himself before he can sell his plans.

Most of all a young boy must have imagination, enthusiasm and common sense. They must be in equal parts for it he would have too much imagination and not enough common sense, he wouldn't get anywhere.

THE ARCHITECT'S TRAINING

To become an architect a boy must, after graduation from high school, study at an architectural school or college for a minimum of five years, taking such courses as architectural design, material, design theory, working drawings and business practice. After graduation from an accredited school, he must spend at least three years as an apprentice to a licensed architect to broaden his technical knowledge while providing practical experience. At the end of these years, he must take a four day examination given him by the state or states in which he intends to practice. A boy can also become an architect without formal training by practicing under a licensed architect for twelve years, but it is advisable to go to college.

There are many accredited schools from which to choose. Here are only a few: Georgia Institute of Technology, Harvard, Illinois Institute of Technology, Massachusetts Institute of Technology, University of Michigan, and the University of Pennsylvania. The tuition at these schools runs from \$600 at Georgia Tech to \$1500 at M.I.T. To this a boy must add an additional 600 to 1000 dollars for room and board.

THE WORKING CONDITIONS

Although the working hours are basically from eight o'clock until noon and from one until four o'clock, an architect must be willing to work from sixteen to eighteen hours a day. This increase in working hours is due to the fact that the architect must get plans out for buildings before a certain deadline. These busy seasons usually come in the spring and summer since more structures are being built.

There are certain mental strains which come with an

architect's work. Some of them are: figuring out a plan for a hospital so that the quickest service can be given or planning a house so it will be suitable for disabled occupants.

The compensation which an architect receives for his services varies according to type and size of the building, the architect's standing in the field, the location in which he practices and time required to draw up the plans. The fee is settled at an early conference with the final agreement stated in a formal contract, countersigned by the owner and the architect.

There are four methods for paying an architect, they are:

- 1) A percentage of the construction cost of the project.
- 2) A professional fee plus reimbursement of expenses.
- 3) A multiple or direct personal expense.
- 4) A salary, per diem, or hourly compensation.

The architect usually starts out as a junior draftsman in a large firm. After about three years, he may become a senior draftsman assigned to working drawings. Some may even become job leaders or a partner in a firm. Most architects dream of going into practice for themselves but only about one-half do.

A friend once asked a noted architect if he ever got bored with his work.

The architect replied "How could I? One month I may be doing a new bank and have to design a vault that no bandit can get in. The next month I may be doing a shopping center and developing ways to make marketing more pleasant for women. Each assignment represents an exciting challenge. Even if it's merely a small house it's an adventure to discover the kind of shelter that will best fit that particular family."

EMPLOYMENT OUTLOOK

The need for architects has been growing ever since 1945 and is expected to keep climbing.

Since most architects work on non-residential projects—office buildings, stores, hospitals, schools, and government buildings—the demand for architects depends primarily on the volume of this construction. This type of construction which reached a record high in the 1950's is expected to increase considerably in the near future. By 1965 the volume of non-residential construction may be about 30 per cent greater than that of 1957 and about 70 per cent greater by 1975.

Residential construction is expected to more than double by the year 1975. On top of this large increase of construction, each year there will be approximately 600 job openings because of retirements and deaths.

The architect is needed anywhere that construction is a growing industry such as young towns and cities beginning to expand or older towns which are rebuilding.

THE INCOME

If you want to become a millionaire, then architecture is not for you, but the field of architecture does give a young man a good starting pay and an excellent chance for advancement. The average pay for an architect, after graduation, is about \$100. If he would work in a firm he would probably not make more than 10 to 12 thousand dollars a year but if he would go out on

(to page 18)

Facts About Architecture

(from page 17) his own he would earn 25 to 50 thousand a year, some make even more, but only a very small percentage do.

Many think that money is the only way by which an architect gets his compensation but he also gets the pleasure of knowing that he is helping people to live, work, play and worship together in a better way.

SUMMARY

Architecture is growing more and more. A young man or woman would be well off in this profession. They would get the prestige of knowing they help the well-being of human nature. Architects usually make between 10 and 12 thousand dollars a year. The architect works about 8 hours a day, but he may work up to 18 a day. He must be many things in one, he must be an engineer, artist, technician, designer, mathematician and a diplomat. An architect works with a small group of people usually and he hardly ever has two assignments alike.

All in all, I believe architecture would make a fine profession for any capable person.

Industrial Architecture

(from page 15)

It is the ideal of every architect to design a building and present such complete working drawings and specifications for it that no changes need be made during construction. This may not be possible because:

- Precise requirements of building may change
- Relative costs of certain materials may change
- Unforeseen conditions may come to light
- Client's budget may be altered

For whatever reason a change is desired, it is the duty of the architect to describe the proposed change adequately and to secure from the contractor his estimate of the difference in the construction cost resulting from the change, supported by a detailed breakdown of costs. With the owner's approval, the architect issues the change order.

When the building is substantially completed, the architect and project inspector examine it thoroughly in the presence of the contractor and his superintendent, and make a list of needed corrections. When all corrections have been made, this same group (possible with the addition of the owner) re-examines the building and if all known defects have been corrected, the architect issues the Final Certificate. A similar inspection may be made at the expiration of one year.

It is obvious that to perform many of these duties, an architect must be free from bias and pressure. This is impossible unless he is engaged directly by the owner, his client. He must also possess skill in design and knowledge of

construction which can come only from years of education and experience. To carry the responsibilities, which accompany his duties, an architect must have judgment based upon knowledge and spirit of fairness.

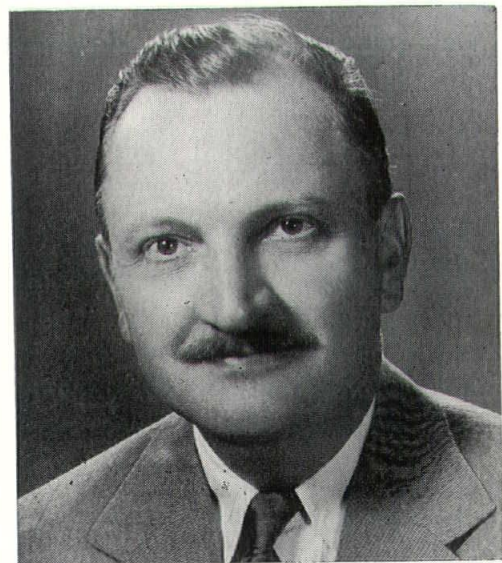
Everyone knows that an architect cannot himself perform all of the tasks which go with the design and administration of the construction of building projects, and that for each of many projects many professional collaborators are needed. It is essential for efficient building, however, that one individual be designated as the coordinator of all professional services. Since most projects must start with a program and design, and since the architect is trained to serve in those capacities, he is the logical choice.

Fran Schroeder To Head CSI

Architect Fran E. Schroeder, AIA, has been elected President of the Indianapolis Chapter of the Construction Specification Institute. The C.S.I. is a guiding contingent in the construction industry, directly concerned with construction specification standards.

The Chapter is cooperating with the State Legislative Study Commission toward establishing new procedures on State construction. Other C.S.I. Technical Committees are working with the Associated General Contractors Association and the Indiana Society of Architects to develop standard specifications for the industry.

Other officers elected are Walter Scholer, Jr., AIA, First Vice-President; John B. Price, Second Vice-President; Joe C. Ripberger, Treasurer; Charles A. Weaver, Secretary; and Dave L. Richardson, Director. John C. Fleck, AIA, is immediate Past President.



FRAN E. SCROEDER, AIA
CSI President



12-room concrete school in 3 months with unique "lift-slab" method!



Classrooms coming up! Observing one of the 23 jacks used to lift the roof slab are Gregory Lauer, builder; James McCarron, architect; Dorsey Moss, engineer.

St. Therese Catholic School, Fort Wayne, Indiana, shows how concrete and new techniques meet the need for accelerated school construction.

Bids were received June 23rd. Construction was under way by July 17th. The ground floor slab was cast in place first. On top of this was cast the second floor slab—and on top of this the roof slab. Lifting of the slabs into position started August 25th.

Hydraulic jacks attached to columns were used to hoist the roof and second floor slabs. Each slab weighed approximately 370 tons and was 150 feet long and 88 feet wide. Lifting rate was two feet an hour. Total school area is 21,560 square feet—12 classrooms, six on each floor.

School opened October 1st. But time was not the only saving. Concrete "lift-slab" technique also meant lower construction costs. Long life and low upkeep will assure minimum annual cost. If your community is considering a new school, write for complete information.

PORTLAND CEMENT ASSOCIATION

612 Merchants Bank Bldg., Indianapolis 4, Ind.

A national organization to improve and extend the uses of concrete

the mark of a
modern school...

CONCRETE

THE INDIANA ARCHITECT
P. O. Box 55594
Indianapolis 5, Indiana

Bulk Rate
U. S. POSTAGE

PAID

Indianapolis, Ind.
Permit No. 1497

George E. Pettengill, Libr.
American Institute of Architects
1735 New York Ave., N.W.
Washington 6, D. C.

Return Requested

MASONRY SCREENS

COLOR

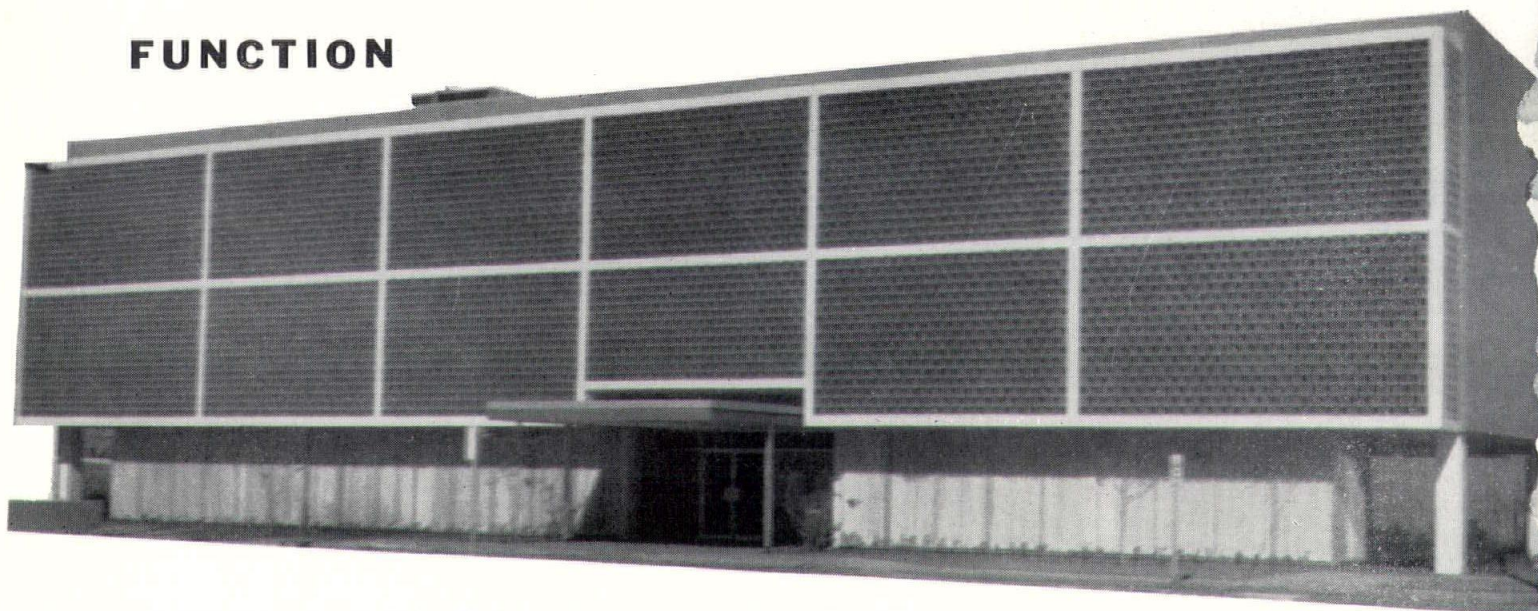
FORM

TEXTURE

PATTERN

FUNCTION

It is estimated that for every 100 square feet of unshaded window area receiving an average amount of sunlight, an additional ton of air conditioning must be provided at a cost of about \$1,000. Over a 20-year period, this might figure out to as much as \$15 per square foot of glass. To this also must be added the initial cost of the glass and a capital recovery factor. Where the architect chooses glass as the solution to a particular design problem, its high cost can be substantially reduced through the use of masonry screens, which can reduce instantaneous heat gain through glass surfaces by as much as 85 per cent. Economies can also be effected in walls and columns concealed by screens, and by reducing the need for interior blinds or drapes.



Bettes Building, Oklahoma City, Okla., Caudill, Rowlett & Scott, Archs., Sisk photo

UNIT MASONRY ASSOCIATION, Inc.

5420 North College

CLifford 5-3114

Indianapolis, Indiana

Buildings with a Future... Through Masonry