

SEPTEMBER, 1955


# OHIO ARCHITECT

OFFICIAL PUBLICATION OF THE ARCHITECTS SOCIETY OF OHIO OF THE AMERICAN INSTITUTE OF ARCHITECTS



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**1912**



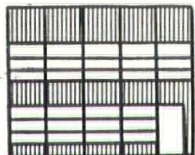
**1890**  
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Window inserts for concrete buildings. **1920**

**1918** Wrought iron windows. War production; steel windows, screw posts.

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**1929** Guard windows for prisons.



Bomb shelter doors. Recoil mechanisms for anti-aircraft guns. Hangars, USAF. **1941**

**1940** Steel detention awning projected windows. Doors for liberty ships. 

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**1950** Steel detention curtain wall systems; 1954—Aluminum.

**1955** Steel intermediate projected windows.



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# Ohio Building News

Belman, Gillett and Richards, Toledo, are architects for Ohio University's College of Commerce Building, Athens. The \$860,000 structure is scheduled for completion in the summer of 1956.

Ground has been broken in Akron for the \$300,000 office and warehouse of Graybar Electric Co., Inc. Architects Edwin W. Wagner and John R. Luxmore, Akron, have designed the one story brick and concrete block structure to have 40,000 square feet of floor space with 10,000 square feet devoted to offices. Albert M. Higley Co., Cleveland, is the general contractor.

The first of four new light industrial factories whose total cost will exceed \$1,000,000 is planned by the Hunter Mfg. Co., Solon. Dalton and Dalton, Cleveland architects, have designed the all modern, one-floor plant to conform with community plans. Other companies to build will be the Lewis Machine Co., the Frohring Machine Co., Newbury, and one other still to be named. Leonard H. Krill Co. will be contractor for all four. The development is hailed as a great community asset and the new industry is expected to bring a substantial revenue.

An \$80,000 construction and remodeling program will be launched in September by the 144 year old Ft. McKinley Church of the Brethren, Dayton. Main feature will be a two story educational unit with basement. This 18 room brick addition will harmonize in design with the present structure. The sanctuary will be completely remodeled with a large fellowship hall with modern kitchen facilities created in the basement. Forrest Groff, Elgin, Ill., is the denominational architect and building counselor.

The North Park Avenue Baptist Church, Warren, is planning to build a new church next spring. G. Donald Schade, AIA, Warren, has designed the

entire building to be fire-resistant and convenient to use as well as being completely modern in every respect. The sanctuary, which will seat 200, features the chancel with its pulpit and lectern, divided choir and altar at the center rear just in front of the baptistry which is reached from rooms at each side. The fellowship hall will be equipped with a stage and modern kitchen.

A new multi-million dollar post office building is being planned for Columbus with construction to start sometime in July, 1956. The tentative site is named as just south of the railroad tracks between Front Street and the Ohio Penitentiary and just north of Naughten Street. It is large enough to seat the one-and-a half story building planned by the Post Office to increase its mail handling service in Columbus. This is due largely to the new Sears, Roebuck & Company regional mail order house which will be under construction this winter at Sandusky Street and Olentangy River Road.

Architect Loren J. Staker, AIA, Columbus, has completed final plans for the new hospital to be located in Crestline. The 38 bed hospital will be constructed of steel and concrete slab with a brick exterior. It will have an operating room, a delivery room, nursery, emergency room, a kitchen and space for future laundry and x-ray rooms.

After final plans are approved by the State Board of Health, bonds will be sold contracts let for construction of the hospital.

Richard E. Lawrence and Eugene W. Dykes, AIA, Canton, are architects for the \$105,000 Madge Youtz school to be built in Canton. The 12 room structure will include six classrooms, principal's office, book storage, boiler room and toilets. The master plan calls for later addition of six more classrooms, library, kindergarten and

all-purpose room. Bids for the school were due August 24. It is scheduled to open in September, 1956.

Dan A. Carmichael, Jr., AIA, Columbus, is the architect for the new \$600,000 nurses' dormitory and classroom building to be built at Holzer Hospital, Gallipolis. The three story U-shaped structure will enable the hospital to expand the nursing school to 100 students. Contractor J. H. Jimison and Sons estimate that 10 months will be required to complete the dormitory.

Plans for converting the former First Evangelical and Reformed church building into quarters for two branches of county government have been approved at Akron. Drawings of the proposed changes were presented by Architect Trefon Sagadencky, AIA, Cuyahoga Falls. The alterations will adapt the buildings for use by the Board of Elections and Juvenile Court workers. Clerk Julius Kohler of the county board said it will take at least two months to dispose of the legal technicalities and get a contract awarded.

The construction of a women's dormitory is the first phase in the physical improvement program taking place at Muskingum College, New Concord. Benhan, Richards & Armstrong, Columbus, are architects for the building which will be ready for occupancy in the fall of 1956. E. Mast & Sons, Zanesville, has been named general contractor.

The new completely modern Midview High School near Elyria is the work of architects Beiswenger, Hoch and White, Akron. A completely fire resistant plant, the building includes 25 classrooms, special facilities for sciences, home economics and commercial subjects. Corridors are lined with the newest type lockers for student use. A bond issue for \$874,000 made the building possible. General contractor is Elmer Hume, Inc., Amherst.



## PRESIDENT'S MESSAGE

Be it on the topmost floor of the tallest, downtown office building; the lowest level of our noted subsurface structures; or in the remote, one-floor cabin of the lesser populated countryside of Ohio, we all have opportunity for setting forth the "best foot" to our client who makes it possible for us to practice our chosen profession.

Upon the prospective client's first entrance into our workshop he is immediately impressed. Is he favorably impressed, or does he feel he has made a grave error in coming? Perhaps he has come without the slightest motivation or good word from a former client so an open mind is quite apparent.

*As a rule, first impressions are lasting.*

Our outer office, or reception room should be so arranged as to make our prospect feel at ease and welcome. Large or small, the well planned office presents a well dressed receptionist, typist, or secretary. The welcome she imparts to our first-time visitor is one of the principle keys for unlocking the entire scope of our penthouse. No sense of aloofness may be offered—it can offend. Only absolute goodwill should be presented in the initial contact of our front office representative with our prospect.

Yes, our prospective client might just contact us by telephone. Here again, the manner in which he is greeted may impart a welcome. If not, he probably calls no more.

It is not so much what style of chair we have in our front office, but how our newcomer is made to feel that is all important. The rough grass rug on the far off islander's office in the tropics may spell welcome just as well as the oriental rug in the luxuriant, big-time office. The caller will be happy he came to your penthouse of architecture if it is presented in the welcome manner.

Always remember that the presentation of our office, however small, must be at its best and that our very success depends upon this means of public relations to a large degree.

As professionals, we should always be alert to a change for the better in the art of making our first impression the very best.

Come to Cleveland, October 19-20-21, and become better informed on this subject.

## EDITORIAL

Each month OHIO ARCHITECT is mailed to more than 3500 persons. It goes to 1799 architects registered to practice in Ohio. It is sent to approximately 1700 other persons in Ohio. This group is composed of elective and appointed state officers, school board presidents, city mayors and managers, city and county engineers, building inspectors, hospital superintendents, college presidents, and several other classifications.

At first glance these readers might appear to have little in common, but upon closer examination they are homogeneous in several respects. All are important and influential citizens in Ohio and in their respective communities. All are interested in some phase of the building industry, whether it be schools, churches, hospitals, or governmental or public structures.

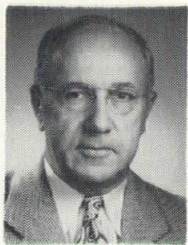
Part of the objective of the Architects Society of Ohio is to bring to these readers of OHIO ARCHITECT a better understanding of the values of architectural services. It is to demonstrate to the future owner that the services an architect performs does not cost—it pays.

However, this is only part of the overall purpose of this magazine. It is not enough that these readers understand the architect and the problems of his profession. Because before the architect can render the highest possible degree of service to the client he must understand these readers and their particular problems.

To reach this overall objective OHIO ARCHITECT has requested articles from members of these groups that will outline their thinking, their ideas, and their problems relative to their particular building programs.

These articles will be published as features from time to time in OHIO ARCHITECT.





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 OF THE AMERICAN INSTITUTE OF ARCHITECTS

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OHIO ARCHITECT publishes educational articles, architectural and building news, news of persons and the activities of the Architects Society of Ohio.



## Ohio Home Contest Opens

The second annual "Ohio Home" contest sponsored jointly by the Home Builders Association of Greater Cleveland and the Cleveland Home and Flower Show opened August 15 and will close November 12, 1955. Mr. Howard B. Cain, AIA, has announced that this \$1875 architectural design competition is approved by the Committee on Competitions of the American Institute of Architects.

Those eligible to enter are all classes of membership in the Cleveland Chapter, AIA, all architects, architectural draftsmen and fourth and fifth year architectural students who reside, attend school, or have their places of business in northeastern Ohio in the following counties: *Cuyahoga, Geauga, Ashtabula, Lake, Lorain, and Medina.*

First prize in the 1956 Ohio Home contest is \$1500, \$500 of which is to cover cost of making working drawings from which the Ohio Home will be built by the Home Builders Association. It will be one of the featured houses in the 1956 Cleveland Home and Flower show which is sponsored by the Cleveland Chamber of Commerce. Second prize is \$250 in cash and third prize will be \$125.

The Ohio Home is to be designed as a single family basementless house with gross floor space not to exceed 1150 square feet, exclusive of garage, breezeway and carport. It is to be designed to accommodate the needs of a family of man and wife, one son and one daughter. It must be suitable for a lot 70 x 120 feet.

The jury for the competition consists of Maxwell Norcross, AIA, Ernst Payer, AIA, and Wilbur Riddle, AIA, Cleveland. The Home Builders Association will be represented by Melvin Freeland and Leonard Merrick, the Home and Flower Show by Ralph P. Stoddard. Mr. Morgan Yost, nationally known Chicago architect will also be on the board.

Applications should be made to Mr. Cain, Park Building, Cleveland 14.

### L-O-F Aids Eastern Hurricane Areas

The Libbey-Owens-Ford Glass Company is diverting shipments of shatterproof glass fiber reinforced plastic panels to the hurricane and flood stricken areas in the East.

Mr. Joseph S. Finger, vice-president and general manager of the Corrugated Division said, "The acute shortage of window and plate glass to close openings in damaged factories, homes and other buildings can be alleviated a little, we hope, by diverting shipments of our product. Our plant is ready to go on a round-the-clock schedule seven days a week, if necessary, to try to offer assistance to these people."

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# ARCHITECTURAL DEVELOPMENT OF OHIO STATE UNIVERSITY

By  
Howard Dwight Smith, FAIA

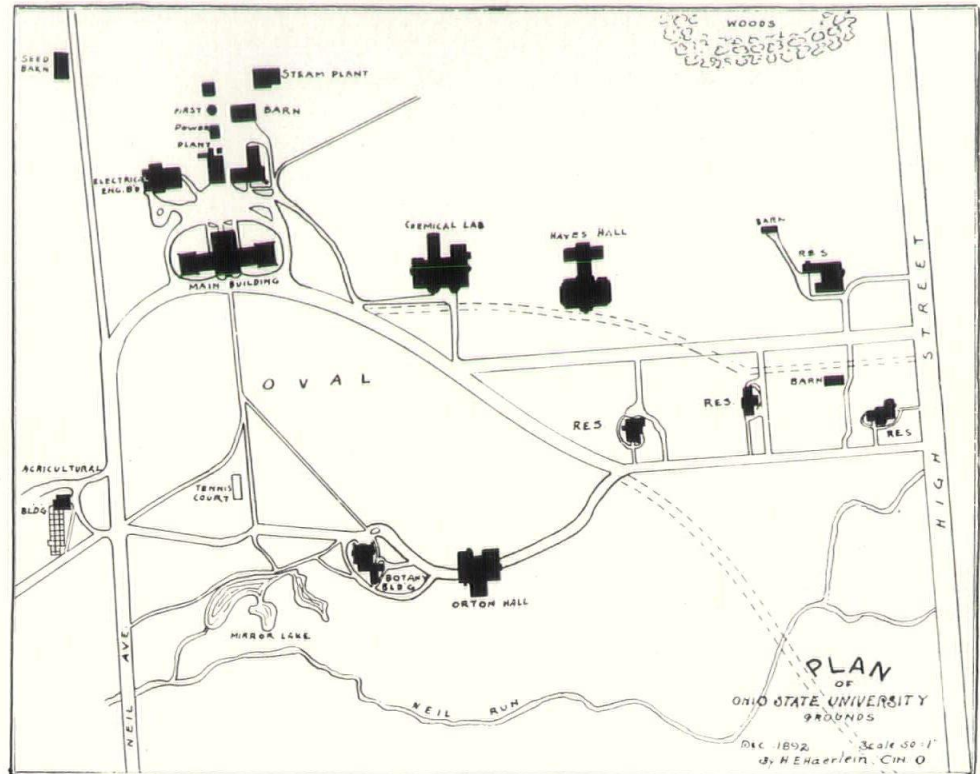
...as submitted through  
Associate Editor Robert Earl Cassell

The Ohio State University is a striking example of the complete separation of church and state. It is a large institution with a well-developed personality, but no affiliation with any religious sect or organization. Three of its seven presidents have been ministers of the gospel, but their church activities have been purely coincidental with their duties as educational administrators. This may also be said of the procession of governing and administering officers throughout the eighty-five years of the University's history.

But if the University itself is validly accepted as a great soulless entity, the same can hardly be said of the campus which nurtures it and upon which it thrives. To some of the thousands of students who have trod its paths and passed through its halls, their perspective is held to the circumscribed areas of their activities, but to all the opportunity is silently presented to see the broad pictures of the environment about them. Some have gone from the University with broadened educations because they have comprehended their environment.

Stories about the campus are influenced by their authors' points of view and the objectives of the moment. This present story has to do with the general nature of its campus plan and the use of its planning principles in studying the expansion of other campuses in Ohio. In 1928, Professor Joseph Nelson Bradford, then University Architect had prepared campus diagrams, some ten or twelve in number, showing the gradual increase in area and in number of buildings. But consideration of diagrams made since 1928, suggest five general stages.

- I. The original plan of 1870.  
The English Estate.



- II. Building expansion outgrowing systematic campus planning. Last two decades of nineteenth century and first decade of the twentieth.

- III. The Joseph N. Bradford plan of 1913, establishing the center oval principle after the main library had been located.

- IV. The Harry I. Williams — Joseph N. Bradford Plan of 1928, establishing the axis and group system of planning. (*Condensed and modified, 1933, by Howard Dwight Smith*)

- V. The Hale Walker Plan of 1948, showing expansion of groups and auxiliary campuses.

## I. The English Estate

Captain Herman Haerlein, who had worked extensively in England as a

landscape architect, had come to Ohio and had laid out the very acceptable Memorial Park in Cincinnati, known as Spring Grove Cemetery. He was called upon in 1870, or just prior thereto, to suggest a plan for the Ohio Agriculture and Mechanical Institute in Columbus. He suggested using the idea of the English Estate with the main building or University Hall located on the highest point of ground as the manor house. The other buildings proposed at that time were dispersed about the spacious estate, laboratories relatively close by and the several residences in the outlying areas. High Street was a dirt road and Neil Avenue was a country byway named for the extensive Neil estate.

The main entrance to the manor was from High Street about opposite where Fourteenth Avenue is now located. The main roadway curved north-west over a small bridge across



Neil Run, (later known as Indianola Run) and continued diagonally across the meadow, now the center of the oval, to a loop at the entrance to University Hall. Barns, shops, greenhouses, paddocks, fields, meadows and lakes, all were part of a great informality that was the beginning of what was to become Ohio State University. Architectural expression was dictated by availability of clay for brick burned on the site and of local stone for steps, sills and trim, with the use of abundant supply of wood for interior construction and for occasional structures where strictest economy was necessary.

## II. Building Expansion Without Campus Planning

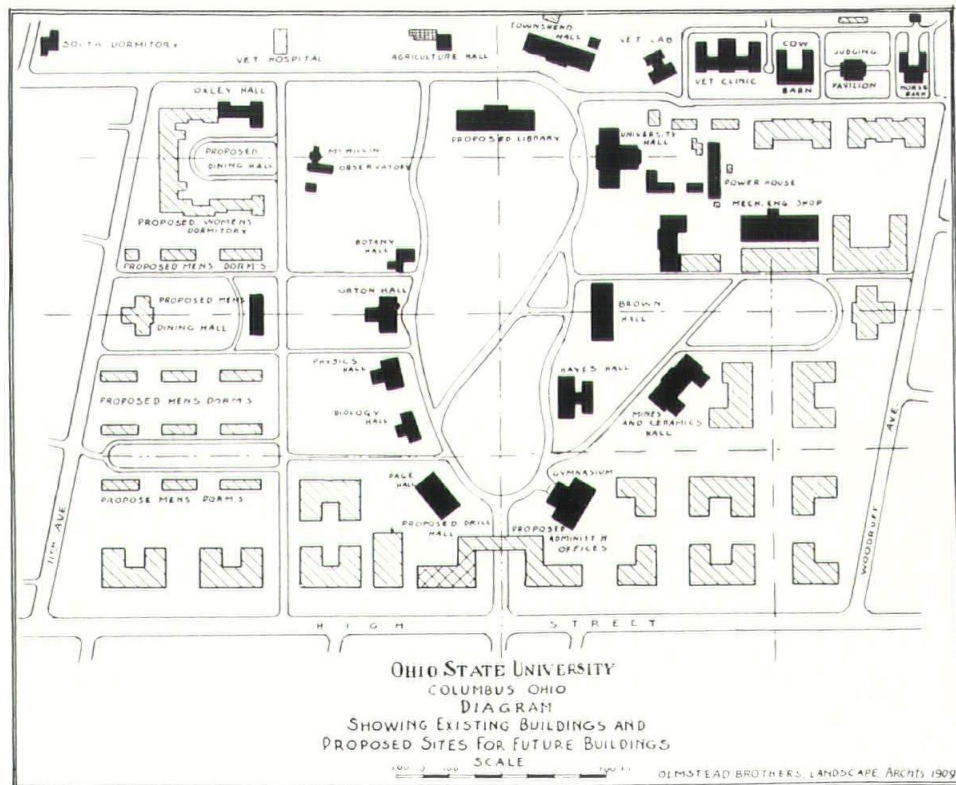
The English manor idea persisted even after it must have been evident that the need for more floor space seemed to suggest, or even to dictate, that the formality of an institution should be followed. But the formula of expansion became fairly uniform. Need for more space pressed by eager and sincere members of a college or departments, picked up sponsors in the administration. The dean of the college or the chairman of the department became the chairman of a building committee and procession of individuality was off to a good start. Architects, sites, and sketch plans were

chosen and approved and gradually, even if imperceptibly, the campus became an agglomeration of unrelated architectural units. In some thirty years time the manor had grown from Institute to University without a plan to guide the efforts of its builders.

One effort seems to have made some imprint upon administrative thinking. There is among the archives a diagram made about 1909, by Olmstead Brothers of Boston, the outstanding landscape planners of the day. This diagram shows the development of a college or university group placed on either side of a wide north-south boulevard extending from Eleventh Avenue to Woodruff. A wonderful idea for formal development but time has indicated the restricted nature of its conception.

Interesting stories are extant about the informal building procedures of this third of a century. Their authenticity is based upon the reminiscing of Professor Joseph N. Bradford whose long career as student, teacher, and architect began in 1887. Two of these stories serve to illustrate the point.

In 1903, Captain Haerlein located Brown Hall for civil engineering, engineering drawing, and architecture north-east of his 1870 Manor House (University Hall) with its front at an angle to the main walls of U-Hall.





Just before the trenches were dug for the foundation, Professors Bradford and French, architects for the building, changed the stakes and the building was located with its entrance front parallel to the front of U-Hall. Incidentally, it is interesting to note that this building was designed to be built of red brick in keeping with U-Hall and with the first Chemistry Building (burned in 1904) but "interests" succeeded in having it constructed of gray-buff-brick, an Ohio product.

The first physics building, later named Mendenhall Laboratory, was located under the guidance of professor Benjamin F. Thomas, chairman of the department of physics. It was oriented so that at the time of his lecture on light, in the middle of the fall quarter, the sun's rays would shine through an opening in the south wall of the main lecture hall directly upon his lecture table. This principle of orientation places the building slightly off parallel with other buildings of the area.

Readjustment of the program of the course in physics have made this major reason for location irrelevant. Later remodeling of the building has placed an intermediate floor across the aperture for the sun's rays. But inability to obtain matching brick leaves visible evidence of the former opening on the south wall.

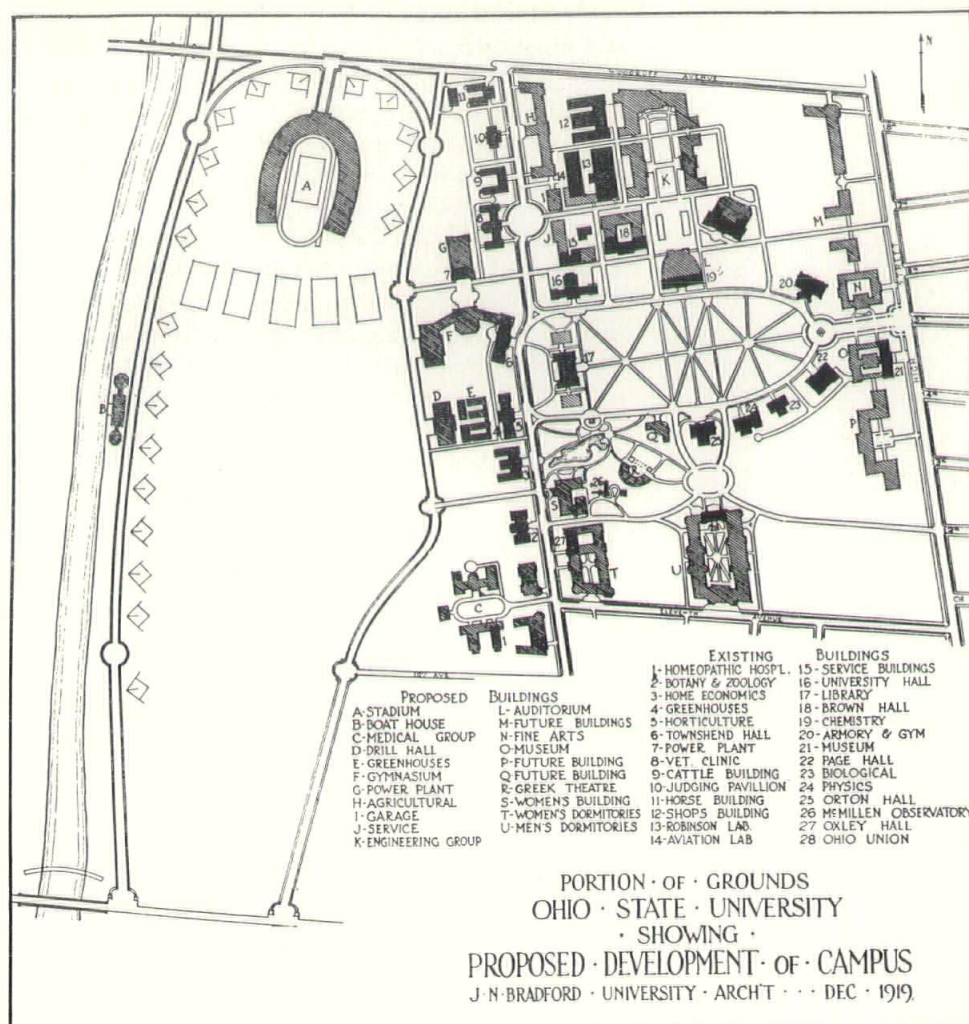
The heterogeneous development of the campus during this era, directed by changing top authority and a variety of architects can best be epitomized by a parody upon the familiar "Old McDonald" jingle:

"Old Ohio had some land,  
OH-IO-IO  
And on that land some buildings  
grew, OH-IO-IO  
With a building here and a building  
ing there,  
Here a building, there a building,  
Buildings, buildings, everywhere."

### III. Bradford Plan 1913

The construction in 1909 of the new main library at the west end of the great open campus area by Allen and Collens, architects, of Boston, was the beginning of an enlightened planning policy on the part of the University. To coordinate and unify the building program, Professor Joseph N. Bradford

SEPTEMBER, 1955



was appointed University Architect. A plan by him in 1913, showing some thirty-seven buildings, is the first which shows any semblance of a center oval. It infers an axis or center line from Fifteenth Avenue through the new library. His 1925 plan, showing sixty-one buildings, leaves no doubt about the dominance of the central oval and the wisdom of controlled planning was well established. The era definitely had passed when the architects for individual buildings were required, as a part of their services, to devise a plan for that portion of the campus surrounding the building in which they were immediately interested. The record shows that Professor Bradford, with his staff, was the architect for about forty buildings between 1913 and 1928.

### IV. The Williams—Bradford Plan of 1928

With the assistance of Harry J. Williams of Dayton, the campus plan was re-analyzed in 1928. This plan anticipated expansion by additional axes for

groups of buildings. This was also condensed and corrected in the 1932-33 depression period by H. D. Smith. The axis through the oval remains the principal academic center. But other axes were established; the recreation axis along the Olentangy River through the stadium; the engineering axis north of the oval; the secondary axis south of the oval through Orton Hall, the old Union and dormitories along Eleventh Avenue; the Medical Center axis in the South-west portion of the campus; and the Educational Group in the North-east portion of the campus. It is this 1932-33 version of the campus plan that set the basic framework of the main campus on an enormous triangle of all-stone buildings, i.e.—The Thompson Library on the high ground at the head of the oval, the Archiological Museum on the south side of the Fifteenth Avenue entrance and the Auditorium just now being built in a complementary position on the north side.



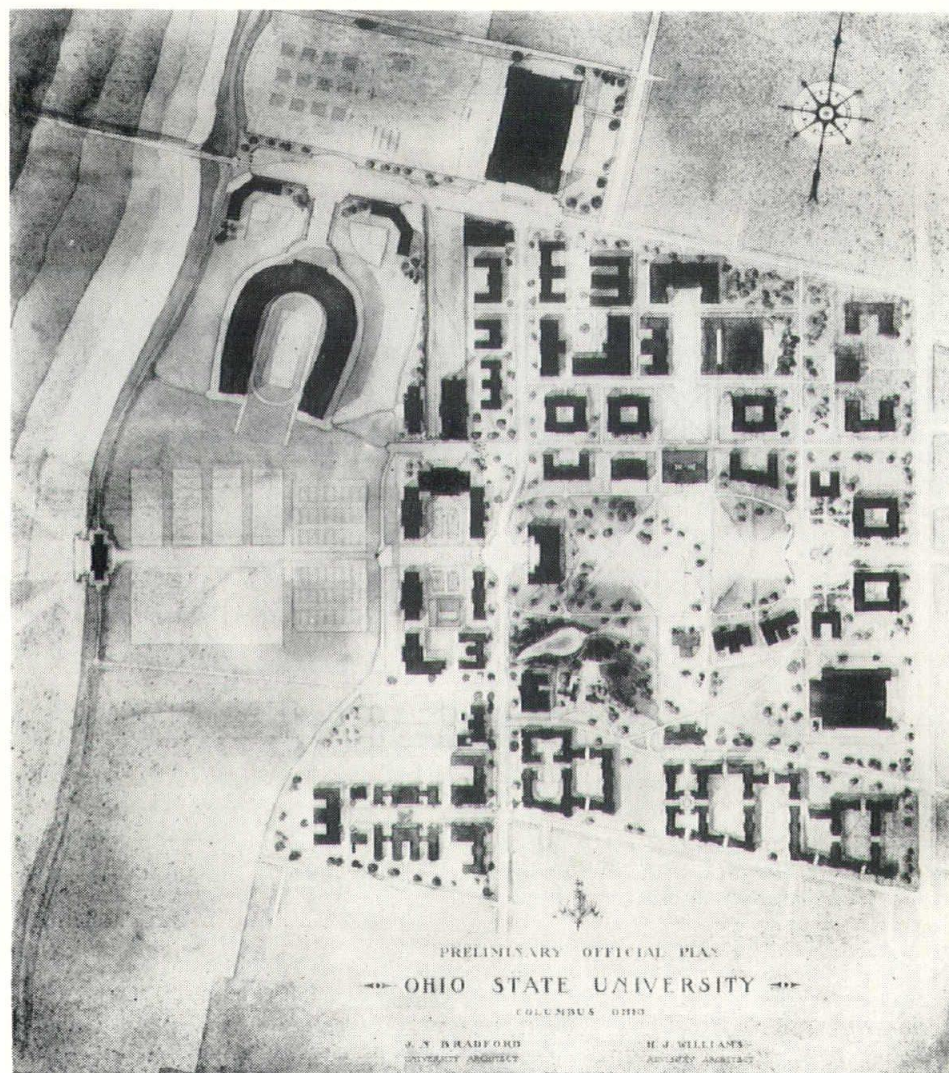
With acceptance and encouragement by the administrations of the University Architect's general policy of simple architectural expression in red brick and gray-stone (except Horticulture and Commerce) around the powerful triangle of stone buildings referred to the above, the varied aspect of the campus has been gradually consolidated, even at the expense of individuality which is so natural an ambition of associate architects for the separate buildings. The administration also has wholeheartedly supported the policy of the present architect's staff to design complete buildings even though only portions are built at first. Such buildings have been devised so that no uncompleted ends are left as permanent architectural eyesores to be indefinitely excused until funds are forthcoming for completion.

#### V. The Walker Plan—1948

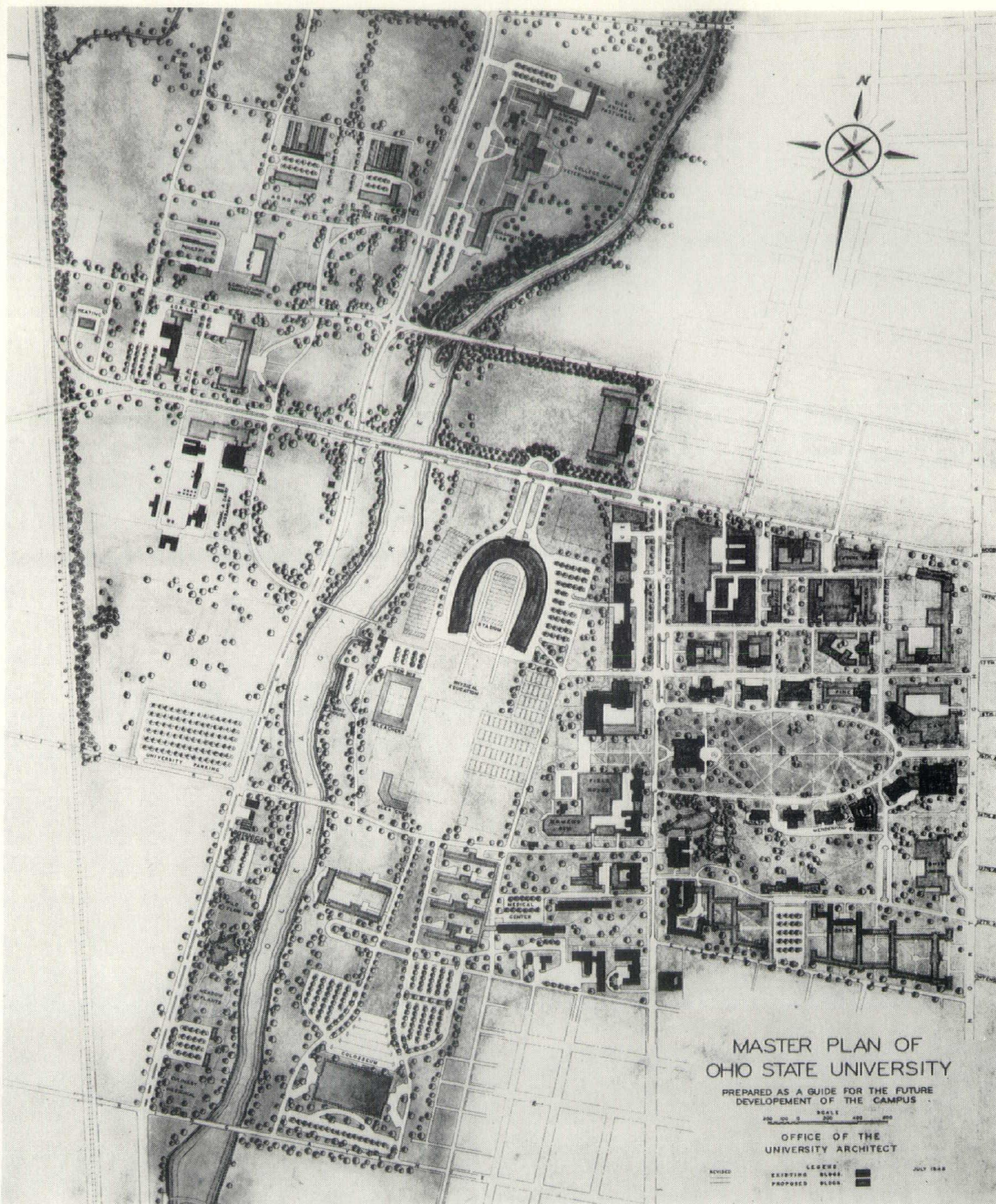
Hale Walker, a landscape architect with New England background, extensive training here and abroad, and experience in public works, including the Greenbelt villages, spent two years with the University studying its campus plan. He brought an open mind, looked ahead a quarter century and nothing was too naive to have consideration. Thirteen hundred acres was the extent of his baliwick and out of his maze of ideas have come some basic features which are sure to remain. On the campus from High Street to the Olentangy River, he simply added items of refinement. But he opened up great visions of auxiliary campuses and groups for faculty and students. And most far reaching is the principle of connection between old and new. This is suggested, first by a four lane boulev-

Photo Credit—Dept. of Photography, OSU

Note north center of plan showing proposed OSU Field House appearing for first time.







### Hale Walker Plan of 1948

Photo Credit—Dept. of Photography, OSU

Colosseum as shown on plan is changed to Arena on axis north of Stadium. Law Building as shown is changed to corner of High and Eleventh streets. Music Building is now under construction at planned Law Building site.



vard from Thompson Library north to Woodruff Avenue and west to the center of a new Agriculture campus, and second by a two lane highway west from the Medical Center, across the Olentangy somewhere near Kinnear Road and connecting with an animal research auxiliary near the Veterinary group. Wild ideas? Perhaps. But at least the preplanning has been done and the location of new buildings of groups will not be an added vicarious service required of architects under

pressure of the moment and without intimate long-term study of the problems involved.

It is evident from comparison of the Walker studies with the 1955 layout of the Ohio State University Campus that a score or more alterations have been made. But except in a few details, the axes and groups have remained in principle and the vision of the future permits of flexible interpretation under careful professional planning.

### Notes on the Author

Howard Dwight Smith, Fellow of the American Institute of Architects, is undoubtedly the best-qualified person to write this article dealing with the architectural development, growth, and planning of Ohio State University.

Forty years as a practicing architect and thirty years as an educator has given Mr. Smith a perspective that few men possess. He recently retired from the Univer-

sity and now has accepted a Fulbright assignment to lecture at Alexandria University in Egypt.

He is to teach architectural philosophy which covers the role of architecture in community organization, the contributions architecture can make to social objectives and architectural aesthetics. He will return to Columbus from Egypt sometime in June of next year.

Photo Credit—Dept. of Photography, OSU  
Aerial view of Ohio State University campus October, 1954





# Analysis and Design of Rigid Frames

By

DR. JOHN B. SCALZI

Associate Professor of Structural Engineering  
Case Institute of Technology

A rigid frame is a statically indeterminate structure and as such its solution is a little more involved than the conventional beam and column analysis. It is essential to have the analysis reflect the true behavior of the frame. The details of design must be consistent with the assumptions of analysis and behavior. The structure must be securely braced in order to resist the lateral forces that may come upon it. With these items in mind let us examine qualitatively those features that affect design, construction details, and architectural treatment. The topics to be discussed are: brief history, analysis of frame, design of components, bracing, erection, economy, and frames of wood and concrete.

## History

No story concerning rigid frames could be told without first discussing its predecessor, the arch.

It is known that the Romans used the arch quite extensively in the years of their reign. Special note is made of the fact that all their arches were semi-circular and of short spans. Therefore, in order to span a large distance multiple arches were used one on top of the other. A good example of this is the famous Pont du Gard in Southern France. The bridge or viaduct is now a historic monument and is still being used. These Roman arches were heavy compared to those of today. The reason for this being the lack of analysis. The arches were designed by empirical rules that were developed from practical experience. They did not analyze the problem as we do today.

In Medieval times the Roman methods of construction and building were lost or forgotten and it wasn't until the Renaissance Era that the problem was studied again. The engineers again designed empirically and in the early

years of the 18th century, the French engineer Lahire applied the principles of statics to the solution of the problem. He applied the funicular polygon method to a semi-circular arch. His basic assumption in the analysis was that the elements of the arch had only normal pressures on their surfaces of contact. This assumption may be restated by saying that only compressive forces act on the cross-section and that small eccentricities do not overcome the direct compressive stresses. This is the behavior of a true arch.

The true arch is a very useful and beautiful structure but requires large abutments and a thick cross-section in order to develop only normal pressures on the various cross-sections.

About 1908, Marbel published a paper concerned with closed rings and curved bars. This was the introduction of the rigid frame.

## Analysis

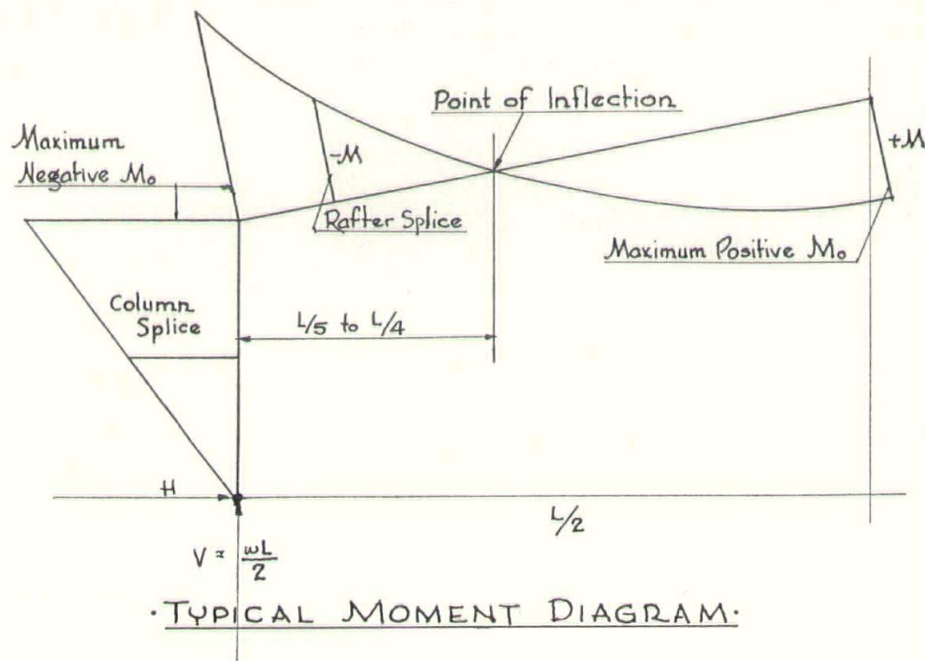
It may be said that a rigid frame is a special arch requiring further analysis of the bending moments at all sections. In fact, the rigid frame is more a problem of bending moments than direct compressive forces. The similarity of the arch and rigid frame

is in the fact that both structures produce horizontal reactions at the supports.

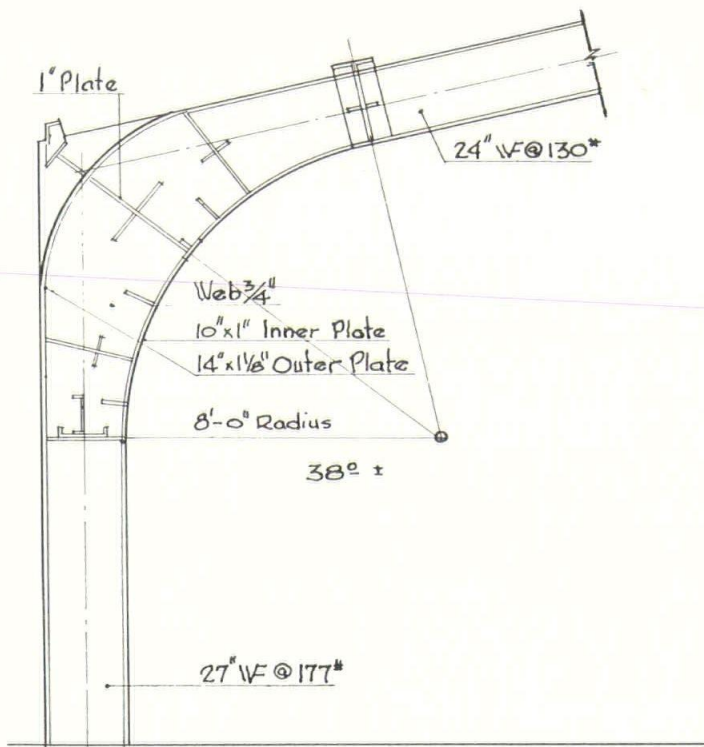
The rigid frame may be indeterminate to as many as three redundants for a fixed base or singly indeterminate for a two-hinged frame. For most soil conditions a two-hinged frame is generally the best, permitting rotation of the column at the bases. Since the frame is indeterminate its solution must be made by methods involving the deflection of the supports. These methods are more intricate than those employing merely the equations of statics. Once the horizontal force is determined the shear and moment diagrams can be constructed. The variation of the direct stress is also known. With this data the design of the primary members and the detail connections may be performed.

A quick easy check of the horizontal force may be made by the use of a brass wire model. This model may be made to simulate the frame in relative stiffness and the deflections may be easily observed. A more accurate model is one of celluloid using microscopes to read the deflections.

Once the reactions are known, and

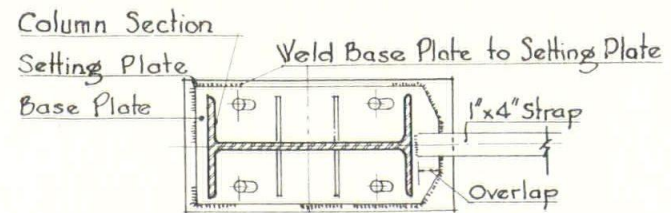




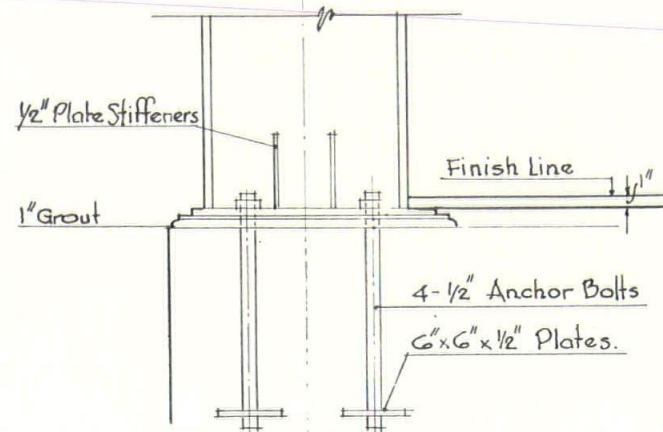


·AVON LAKE SCHOOL·

Fig. 1.



·PLAN·



ST EDWARDS  
TIE ROD DETAIL

Fig. 2.

the shear and moment diagrams are plotted the design of the components may be made. The maximum moment will be found at the center of the knee and it is negative, while the maximum positive moment will occur at the ridge or crown. The moment diagram is used to determine the column splice point and the rafter splice that most closely agrees with the maximum positive moment at the ridge. The rafter splice may be the erection connection, in some instances.

#### Design of Components

**Rafter:** The most efficient rafter is one that is also economical. Therefore, it is convenient to select a rolled section such that the negative moment equals (or nearly so) the maximum positive moment. The direct force is usually a minor consideration. The moment will be the determining factor for size and stability of the flange against lateral buckling.

**Column:** The column is also made of a structural section, uniform or tapered, based on the maximum moment at the attachment to the knee. Consideration is also given to the direct stress acting in the column. The section

must be able to carry the horizontal force as a shear load in the web of the beam. This shear load will determine the width of the base.

**Knee:** The knee is the most critical portion of the frame, requiring a detailed analysis for the bending, shear, and direct forces acting on the section. The moment will determine the depth of the knee and the size of the flanges. For a smooth stress or strain flow a large radius to depth ratio is used. This will also eliminate any stress concentrations due to a curved beam effect. It usually adds to the architectural treatment, thus benefitting both structure and architecture. The shearing force determines the plate thickness required for the web. The direct stress adds to the bending effect and is considered with it.

Other effects to be taken care of are the warping of the inner flange. This is accomplished by using a double flange and intermittent welds to reduce the distortions due to welding. Short stiffeners are also inserted to assist the flange in minimizing the warping due to load in the flange. Radial stiffeners are used to resist the load caused by

the change of direction of the principal normal stresses. If these are not used the web plate must take the load in addition to the shearing forces. Thus a thicker web plate will result.

**Purlins:** The purlin attachment to the frame is of a type to develop a moment resistance, thus acting as a portal for swaying of the structure. It is also advisable to have the purlin support the compression flange of the frame against lateral instability, thus realizing the full capacity of the section. The purlins are usually bolted to the frame as a convenient method of erecting the structure. See Figure 1 for illustration of main members. Sketch is of Avon Lake High School; Architects; Mellenbrook, Foley, and Scott. Structural Engineers, Barber and Magee, Cleveland.

**Tie Rod:** In a rigid frame, whether of fixed or simple bases, the horizontal reaction exerted must be considered in the design of the base detail. The most economical arrangement is to tie the bases together, thus making the force self-contained within the frame itself. The footing will only be called upon to resist the vertical force. Of



course, for small frames of 60-ft. and under it may be convenient to let the footing transfer the horizontal thrust to the soil directly. However, this procedure requires a careful study of the soil conditions. The footing and the frame base must reflect the type of support assumed in the analysis. It would be unwise to assume a fixed base on soft soil since it is conceivable that the entire footing may rotate as a simple support. Figure 2 shows a sketch of the tie rod detail used on the frame in the St. Edwards High School, Lakewood, Ohio. The architects and engineers were the George S. Rider Co. with the firm of Barber and Magee, structural engineers.

**Bracing:** The amount of bracing in any structure is always a matter of opinion. However, a certain amount must be provided to resist the lateral forces imposed on the structure, and to support the frames in their position. The purlin attachment can be used to hold the frames in place and to assist in transferring lateral loads. However, a major portion of the lateral loads is resisted by the bracing of the knees. This support is also used to hold the inner flange of the frame from buckling.

It is also advisable to support the tangent points with bracing, thus absorbing any lateral forces that may be set up at these points. See figure 1 for bracing details at the tangent points of column and rafter and the support of the knee.

**Erection:** The usual procedure is to ship the frame in several convenient sections and to field weld them in a horizontal position. Then using one or more cranes and lifting at the quarter points to raise the frame and set it on the footings lining up with the anchor bolts. The tie rod or tie bar is then fastened to the frame or base plate. Of course, bolted connections may be used but a weld produces a neater and full strength connection.

**Economy:** Needless to say the rigid frame type of construction is approximately 10 to 15% more expensive than the standard truss and columns. However, this difference is for a frame using wide flange sections for the column and rafter. In this case only

the knee must be fabricated. The cost of a frame using a curved tapered section throughout will necessarily be higher. Perhaps this increase may reach a value of 25% over the standard wide flange frame. In general, the increase in cost is not a deterring factor because the aesthetic values far surpass the small additional cost. Most clients are aware of the beauty and usefulness of the frames and are willing to forego the increase in cost.

#### Wood and Concrete Frames

Rigid frames of wood and concrete are basically the same problem. The major difference being in the allowable stresses for the different materials. The analysis for the shear and moment diagram is identical for all materials. The bracing requirements are also similar in nature. Since wood and concrete are usually thicker sections the problem of local buckling is not as important. Wood frames of two or three hinges lend themselves to church structures, while steel seems to be preferred for auditoriums and gymnasiums. Although concrete is generally applied to bridge rigid frames it has recently been used in a church structure in Ohio. With proper treatment of the surface, concrete can be used to advantage in

any situation.

#### Versatility

Rigid frames are not merely for the long spans, but have been used effectively for short spans as well. The shortest may be a 22 ft. span used for a small covered walk. Whether large or small the same structural problems are present but to varying degrees.

#### Summary

The design of many frames has brought out the following facts.

1. *Rolled sections are more economical.*
2. *A curved inner and outer haunch line follows the stress and strain lines more efficiently.*
3. *Sufficient stiffeners must be provided to prevent general and local buckling in the knee.*
4. *Bracing must be supplied at the tangent points and at the center of the knee as a portal effect.*
5. *Purlins or similar roofing should be used to brace the compression flange of the frame.*
6. *The tie rods should transfer the load directly to the column.*
7. *The anchor bolts must be large enough to resist the wind forces on both sides.*

#### ABOUT THE AUTHOR

John B. Scalzi received his B.S. in Civil Engineering from Worcester Polytechnic Institute. He was awarded the S.M. in 1940 and in 1951 the Sc.D. in the same field from Massachusetts Institute of Technology.

Mr. Scalzi's professional work has been largely in structures.



He was associated with the Curtiss-Wright Corporation as a structural engineer in aircraft design and the National Aniline Division at Buffalo as structural designer. In 1946 he became an assistant professor in structural engineering at Case Institute of Technology and in 1950 an associate professor.

In Cleveland Mr. Scalzi has been affiliated with the Central Viaduct Inner-Belt Freeway Commission as a bridge designer, Trygve Hoff Associates and Dalton and Dalton Associates as structural designer. These associations provided experience in analysis and design of bridges, buildings of steel and concrete, rigid frames, foundations, and heavy material handling equipment. He is presently with the Western Reserve University School of Architecture as lecturer in structural theory and design. His teaching experience includes graduate and undergraduate courses in structural theory, stress analysis, and design of structures in steel, concrete, aluminum, timber and aircraft. He has made several contributions to the literature of his field through publication in engineering and professional journals.



# Producers' Council Caravan

The first Ohio showing of the 1955-56 Producers' Council *Caravan of Quality Building Products and Modular Application* on September 20 at the Southern Hotel in Columbus was greeted by a large audience of architects, engineers, builders, and others interested in Ohio's construction industry.

The Caravan is a traveling building material and equipment exhibition. It is touring the nation from coast to coast, exhibiting in 36 cities in which the Council operates local chapters. The tour is over 25,000 miles in length and will require seven months to complete.

The Caravan is unique among building material exhibitions in that the display is taken to the audience. Total cost will be approximately \$200,000. It contains 45 booths displaying the products of 43 companies and associations. The exhibits, which are of the same basic design and dimension, vary greatly in methods of telling product stories. Products are shown by samples, models, cutaways, pictures, translights and drawings. A representative of exhibiting companies is present at all times in each exhibit to answer the questions of the viewers.

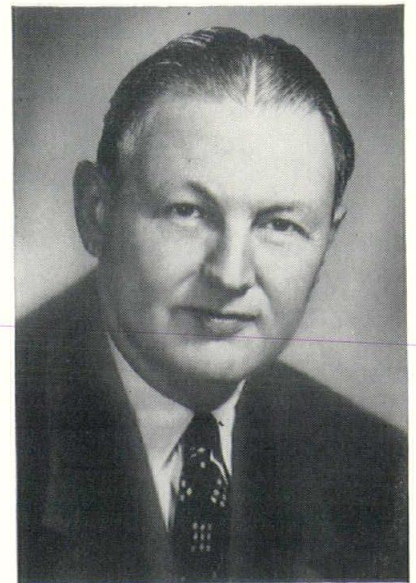
An added feature of this year's Caravan will be showings by several exhibitors of modular materials and their application in building. Modular materials differ from other building materials in that they are dimensioned in increments of 4". The purpose of

this system of dimensioning is to assure that materials produced by one manufacturer will fit next to those produced by another without unnecessary cutting and fitting. In practice, modular measure has eliminated unnecessary wastage, thus permitting substantial savings in building costs. By featuring modular application, Council members hope to promote a more general use of the dimensioning system.

Producers' Council, Inc. for many years has been advocating the use of quality material and good design as a means of eliminating building problems. Proper consideration of these two important factors would have eliminated many of the expansive developments of "cheese box" houses which sprung up after World War II. Quality materials and good design can also help prevent many of the slums which can plague our cities in the future.

The Council is a nation-wide organization of 140 large and small manufacturers of quality building materials and 22 industry trade associations. The organization has as its purpose the encouragement of better building through the use of quality products and good design.

It was organized 34 years ago as a



Mr. William Gillett, Detroit Steel Products, and National President of the Producers' Council, Inc.

producers committee of the American Institute of Architects. Although now as a separate organization, it still remains affiliated with the Institute, and works closely to provide its members with the latest and most up-to-date information about building products. The Caravan is one method utilized to achieve this purpose. Similar informational activities are also carried on for members of the National Association of Home Builders, Associated General Contractors of America, National Retail Lumber Dealers Association, engineers, mortgage bankers and government officials.

C. Melvin Frank, President of the ASO, and officers of the Columbus Chapter of the Producers' Council and AIA present Governor Frank J. Lausche with an invitation to the Columbus showing of the Caravan. Left to right: Camden Swart, Caravan Chairman; Neal Layne, PC Secretary; ASO President Frank; Governor Lausche; Eugene Hannum, PC President; Gerald Emrick, Vice-President of Columbus AIA Chapter; and Howard Groetzinger, PC Vice-President.



Photo Credit—"Pics," Chicago

This is the specially designed vehicle that is transporting the 45 exhibits on the 25,000 mile Caravan. It is the largest truck allowed on the highways.





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## KENT STATE NEWS

By  
William J. Tietz

The annual summer banquet of the Kent State Chapter of the AIA took place at Iacomini's in Akron on Thursday, August 18. The meeting was attended by Kent's most recent addition to the ranks of registered architects — Mr. Bernard Rady.

More than fifty members and guests heard a very fine talk by the well-known Cleveland architect, Mr. J. Byers Hayes, AIA. Mr. Hayes showed a collection of slides prepared by him when he was in Germany with thirteen other persons, all of whom were guests of the West German government. His slides gave an interesting and complete report on what is being done in Western Germany today.

Mr. Hayes was introduced by Mr. Robert C. Gaede, AIA, also a Cleveland architect, who will be returning again as a member of the Kent State Faculty this September.

The Student Chapter Officers for the coming year were introduced to the group. They are: Gordon Paulus, *President*; Bob Saunders, *Vice-president*; William Tietz, *Secretary*; and Jack Wright, *Treasurer*.

Professor J. F. Morbito, Kent Architect and Faculty Advisor of the Kent State Chapter, AIA, introduced Mr. Clyde A. Patterson of the Western Reserve Architectural School Faculty. Mr. Patterson is interested in having the Kent and Reserve Chapters get together to exchange ideas and cooperate in some activities. His suggestions were received favorably by the Kent people.

### Bibliography of OHIO ARCHITECT

There has been some question as to the exact bibliographic status of OHIO ARCHITECT since publication was resumed with the July issue, numbered 7.

Although numbers 3-6 (March-June) were not published, it was decided to use consecutive numbering for the sake of uniformity. Subsequent issues will follow in the usual fashion—January being No. 1, February No. 2, etc., through December, No. 12.

## CONVENTION NOTES

The banquet at the ASO Convention will be held on *Friday*, October 21, this year. This arrangement will permit attendants to be home for the week end without missing this important event.

Members are urged to return their Hotel reservation cards as soon as possible after receiving them in order to insure lodging for their stay in Cleveland. These will be sent with your convention information.

General Electric officials urge that those attending the Nela Park Party make their reservations promptly at the convention. Facilities are limited and proper arrangements must be made.

If you plan to attend the Convention, please remember that Cleveland will remain on Daylight Saving Time until the end of October. Don't let yourself be late by not allowing an hour's loss on arriving from an Eastern Standard Zone. Better still, set your watch on *Cleveland time* when you leave home.

### Past Issues of OHIO ARCHITECT

The ASO office has been advised that back numbers of OHIO ARCHITECT are in demand by persons desiring to complete their files. February and March 1949 are particularly wanted.

Any holder of these or other issues is urged to send them to the ASO office for forwarding.

### Architect Dies

Col. Ferdinand William Bohne, architect, died at Niles on August 6. He was born in Louisville, Ky. in 1871 and was prominent there as an architect and civic leader before coming to Niles. The permanent title and rank of "Kentucky Colonel" was conferred officially by the governor of the state in 1932.

Mr. Bohne spent five years in Seattle before coming to Niles. He moved to the area as an architect for the Carnegie-Illinois Steel Corp. and helped build the town of McDonald.

In Niles he served as president of the Niles Community Corporation. As an architect he designed many buildings and churches in the area, among them Niles City Building.





## Cincinnati Chapter

Benjamin  
Dombar

Robert H. Luck, Curator of the Contemporary Arts Center announces that an outstanding exhibition of British sculpture will be featured September 15 to October 30 at the Cincinnati Art Museum. The sculpture was selected by the British Art Council and will be shown in only three U. S. cities.

In an effort to become better acquainted with fellow members of our AIA chapter, this column will present, as space permits, short biographical sketches of Architects.



Meet India Boyer, AIA, the first woman to pass the Ohio State Architect Examination. Miss Boyer hails from Sydney, Ohio, and graduated from Ohio State University, where she received the Bachelor's Degree in Architecture. Twelve years in the employ of the Corps of Engineers followed graduation. When the engineering firm of Vogt, Ivers & Seaman was organized, Miss Boyer was employed as Architect, and is now an Associate of the firm. She is also a Registered Engineer. If this column enjoys wide circulation among material salesmen, possibly Miss Boyer will be getting less mail and callers for *Mr. India Boyer*.

At the start of a new season, it seems appropriate to mention some of the criticisms heard from non-members regarding the American Institute of Architects, and whether they are justified.

Commonly stated are these beliefs: that a small group of men control policy for the organization; that a young Architect's problems are not studied and dealt with so readily as for established firms; that the group is not progressive enough; and that we are not aggressive and strong such as the A.M.A.

*(Continued on Page 25)*



## Cleveland Chapter

Charles  
Rimer

Trevor Guy, AIA, has been appointed Technical Director of the Home Builders Association of Greater Cleveland.

Mr. Guy is registered in both architecture and engineering and is a member of the American Institute of Architects and the National Society of Professional Engineers.

His new capacity with the rapidly growing Home Builders Association will be assisting the builders in the processing and preparation of FHA and VA applications for commitments. He will also rule on related construction and design problems of the industry.

### Cleveland's \$200,000,000 Question

Systematic and complete "face lifting" in the older Cleveland residential neighborhoods is the old and new problem facing Cleveland planners.

Will this be just a face painting job, or really a complete "face lifting" of which Cleveland will be proud?

The Federal Government has enlisted its aid for this slum clearance job. The City Planning Commission is working along with Cleveland architects, builders, realtors, lending institutions and advertising men to produce methods of accomplishing this mighty task.

Wilbur Riddle, AIA, chairman of this "Operation Demonstrate" announced that the Cleveland AIA Executive Committee has approved the chapter participation in this \$200,000,000 problem.

A before and after pair of houses sponsored by the National Retail Lumber Dealers Association will be moved to the Mall in time for the group's convention in Cleveland early in October. Models and detailed recommendations will be made by an architectural firm.

*(Continued on Page 25)*

# Six Points



## Columbus Chapter

Robert  
Cassell

### August Outing

The August meeting of the Columbus Chapter, AIA, was held at the Westbrook Country Club at Mansfield, Ohio. The Galena Brick Company played host for a social cocktail hour and this was followed by a delicious steak dinner. During the course of the evening, it was suggested that the Cleveland and Eastern Chapters, which are also close to Mansfield, be invited to participate in a joint meeting with the Columbus Chapter next year.

The following men attended the outing: Tom Zaugg with guest George Rake, Electrical Engineer; Charles Conklin, Herbert "Tubby" Jones, Ervin Brune, D. James Crawfis, all of Mansfield; Robert Edwards and James Burris of Marion; Lawrence Russell of Ashland; and Charles Cloud, Eugene Kruse, James Holroyd, Wayne Dipner, Max Teach, David Pierce, Robert Myers, Paul Winters, A. F. Tynan and Arthur Dupre, all of Columbus.

### Vacationing Architects

Fred Hobbs and family spent a month's vacation in Massachusetts and, upon their return, Dick Tully and his family left for a month's stay in the same location.

Ralph C. Kempton recently spent two week's vacation on a fishing trip in northern Michigan.

H. James Holroyd flew his family to Sudbury, Ontario, Canada. From there, they took a sea plane to Penage, Canada, where they stayed for a week's vacation.

Marvin Ames and family motored 2500 miles through some of the Southern states and on the way back stopped off at Paducah, Kentucky to take pic-

*(Continued next column)*



# of Interest

## Dayton Chapter

Robert  
Makarius, Jr.



The Dayton chapter of the AIA held its annual picnic meeting this year on September 15, 1955 at 5:30 p.m. at Seibenthaler's cabin off the Lamme Road.

The meeting and picnic was devoted to fellowship and most business was dispensed with. The picnic is the highlight of the summer and is always enjoyed by everyone who wishes to take the time from pressing business to attend.

tures of the Cardinal Point Shopping Center, which emanated from the office of Tully and Hobbs, Architects. Mr. Ames is an associate of the firm.

### Note From Our Past President

Emil C. Fischer, formerly of Columbus, now of Manhattan, Kansas, writes that he looks forward to each issue of the OHIO ARCHITECT and thus, can keep in touch with his many Ohio friends.

### Christopher Columbus—Discoverer of the Americas

International attention will be focused on Ohio's capital city October 12, when the nation pays homage to the man who discovered America.

On that occasion a statue of Christopher Columbus will be unveiled and dedicated on the City Hall lawn following a gigantic parade and other planned festivities.

The statue is a gift from the people of Genoa, Italy, to this community, the largest city in the world named after the famed explorer. This gesture of international goodwill will be recognized here in a four-day celebration October 9-12. Government leaders and other famous personalities will be on hand to make the occasion a memorable one.

*(Continued next column)*

## Eastern Ohio Chapter

Joseph  
Tuchman

The Eastern Ohio Chapter of the American Institute of Architects had its annual outing at Shady Hollow Country Club August 25.

The afternoon program included golf for the men and a luncheon, bridge and swimming at Congress Lake Club for the women. Following their afternoon entertainment, the women returned to Shady Hollow Country Club for a social hour and dinner.

Golf prizes were awarded by Tommy Thompson and a talk was given to the architects by Mr. Hugh Olmes. General Convention Chairman George B. Mayer, AIA, Cleveland, gave a brief talk about the coming ASO Convention October 19-21 and urged as many architects to attend as possible from Eastern Ohio.

A preview of fall hair styles by Louise West Beauty Shop featured Miss Judy Eshelman, Miss Mary Jane Rich, Mrs. Joseph Rich and Mrs. Clarence Kimble as models. Miss Nancy Dee, graduate of the Earl Wheeler Finishing School of Chicago, discussed "How To Put Your Best Foot Forward."

Chairmen for the day's activities were Mr. and Mrs. Charles E. Firestone, Mr. and Mrs. L. J. Motter and Mr. and Mrs. Charles E. Firestone II.

Mass participation is the theme of this program currently being prepared under the direction of Edward F. Wagner, who was named chairman by joint resolution of the Mayor and City Council.

Special programs and events for the entire four-day period are being planned. In addition to the parade there will be a Columbus Day Banquet and dance. National radio and television networks are planning on originating part or all of some coast-to-coast programs here.

The rest of the world will learn of this event through the Voice of America that will be present to record all

*(Continued next column)*

## Toledo Chapter

Harold  
Munger



The Toledo Chapter, under the leadership of President Horace M. Coy, called its first meeting for Tuesday, September 13, 1955, in the English room of the Commodore Perry Hotel. Several of the new Committee Chairmen, named in last month's article have already had meetings with their committeemen, an indication perhaps, that this year's Chapter group will be very active.

Tuesday, September 27, at 11:00 a.m. has been set as the official opening date of the new Owens-Illinois Glass Company Technical Center at 1700 N. Westwood Ave., Toledo. Much publicity and ceremony will be connected with this affair and many prominent people from throughout the country will be in attendance. There will be dedication ceremonies, luncheon and guided tours to display their very elaborate facilities.

It is noted that three new Architectural Firms have been organized in Toledo. They are:

Bentz & Bankemper  
2126 Wyndhurst Road  
Toledo

Britsch-Macelwane & Associates  
2450 Sylvania Avenue  
Toledo

Munger Munger & Associates  
Security Bank Building  
Toledo

All architects and other interested persons should try to view the new Producers Council Caravan that is scheduled to be at the Commodore Perry Hotel here in Toledo on October 7.

that happens.

Through this medium people everywhere will learn what is meant when we say, "Come to Columbus and discover America!" (Submitted by W. R. Hilbrink, Public Relations Department, North American Aviation, Inc.)

*(Continued on Page 24)*



## CONCERNS LAMINATED ROOF TRUSSES AND FRAMING

The use of laminated roof trusses and framing has been approved for composite and fireproof construction of one story buildings.

Mr. Charles L. Pettibone, Assistant Director of the Department of Industrial Relations, recently issued a directive to this effect to Robert A. Skipton, acting chief, factory and building. The directive gave Mr. Skipton authority to approve the use of Glued Laminated timber framing in both fireproof and composite construction without the requirement of additional fireproofing. These must be constructed in accordance with standard design and fabrication specifications for glued, laminated lumber of the Northern Hemlock and Hardwood Manufacturer's Assn., the Southern Pine Assn., and the West Coast Lumberman's Assn.

In fireproof construction the roof trusses and framing shall maintain an average of 16 feet from the floor level to the bottom of the truss. This authority will be applicable in the construction of one story multi-purpose rooms, assembly halls and gymnasiums, completely exposed, with only height and area restrictions of the particular class of construction governing.

## Exhibit Space at ASO Convention Going Fast

Be sure to check the advantages that you can have by exhibiting your products at the ASO Cleveland Convention—October 19-20-21.

This is a Joint Meeting of the Architects Society of Ohio and the Great Lakes Region of the AIA. Architects will come from Michigan, Indiana, Kentucky, and Ohio!

Every effort is being made to give Exhibitors the opportunity to know the Architect on a personal basis as well as a business basis!

Architects attending the Convention want to keep up-to-date on new materials and techniques. They want to see your products and discuss them with you!

Don't miss this opportunity! Be sure to write now to:

**The Architects Society of Ohio**  
Five East Long Street  
Columbus 15, Ohio

# Propose 221 New Buildings in Ohio

A list of 221 new federal buildings needed in Ohio was submitted to Congress recently by the Post Office Department and the General Services Administration.

The Post Office Department and GSA are required by law to submit such a list every 2 years. Since the report is advisory, it is merely a preliminary step toward possible Congressional authorization. None of the projects can be built without Congressional approval:

Following is the list of 42 proposed buildings added to the Ohio list in the last 2 years. All of them are Post Offices, unless otherwise designated, together with the estimated costs. Where no figure is given, the cost is less than \$200,000.

ANSONIA; Antwerp, \$211,000; Baltimore; Beverly; Brilliant; Brunswick; Buckeye Lake; Cedarville; Centerville; Chesapeake; Dalton; Fayette.

GREEN SPRINGS; Groveport; Gypsum, \$211,000; Hebron; Holgate; Holland; LACARNE, \$215,000; Lakeview; Lexington.

Lynchburg; McCOMB; Milan; Montgomery; NEW VIENNA; OAKWOOD, \$211,000; PANDORA; Perry; Perrysville; REYNOLDSBURG, SABINA, \$215,000; Sardinia; Seville; Shreve.

South Charleston; UNIONTOWN; VIENNA; WEST Jefferson; Wheelersburg; Whitehouse, \$211,000.

Other federal buildings previously listed as needed—and carried over into the new list—are (all Post Offices unless otherwise designated);

ADENA; Amelia; Arcanum, \$211,000; Ashley; Ashtabula, \$735,000; Ashville; Attica; Avon Lake, \$220,000; Barberton, \$430,000; Batavia, \$235,000; Bay Village, \$225,000; Bellville.

BETHEL, \$211,000; Bethesda; Blanchester, \$215,000; Bremen; Brookville, \$215,000; Burton.

Byesville, \$215,000; CADIZ, \$231,000; Camden; Canal Fulton; Canal Winchester, \$211,000; Canton (North Canton Branch), \$225,000; Cardington, Carrollton, \$260,000; Chesterland.

Cincinnati (Public Health Service Laboratory), \$6,480,000; Cincinnati (Norwood Branch Post Office), \$325,000; Cleveland (Post Office, Court House, Custom House), \$1,970,000; Cleveland (Heights Branch) \$650,000.

Cleves, \$211,000; Columbiana, \$240,000; Columbus Grove, \$211,000; Copley, \$211,000; Cortland, \$211,000; DELTA, \$211,000; Deshler; Doylestown, \$205,000; Dresden; EAST Canton; East Liverpool, \$785,000; East Sparta, \$211,000.

Edgerton, \$220,000; Elmore; Elyria, \$815,000; Englewood, \$205,000; Excello; FLUSHING; Fort Recovery; Fredericktown, \$211,000; GAHANNA, \$203,000.

Garrettsville, \$215,000; Gates Mills; Genoa, \$211,000; Germantown, \$211,000; Gibonburg, \$211,000; Glendale, \$220,000; Gouster, Grafton, \$211,000; Greenwich, \$215,000; HARTVILLE, \$215,000.

Hicksville, \$220,000; Hilliards; Hiram; Hudson, \$230,000; Huron, \$215,000; JOHNSTOWN, \$211,000; Junction City, KINSMAN; LA RUE; Leavittsburg; LeRoy, \$211,000.

*(Continued on Page 26)*



# Complete List of Columbus School Projects

The following complete listing of Columbus School projects was submitted by Associate Editor Robert Earl Cassell, AIA, who expresses his thanks to Mr. Edward Kromer, AIA, Columbus School Board Architect, for making the list available.

## Additions and Alterations

### Central Senior High School

*Architects:* Freshwater & Harrison  
*Addition:* \$313,515  
*General Contractor:* Krause & Pagura, Inc.  
*Mechanical Contractor:* John A. Guy, Inc.  
*Electrical Contractor:* Fast Electric Company  
*Alterations:* \$67,987  
*General Contractor:* Wagenbrenner Construction Company  
*Mechanical Contractor:* John A. Guy, Inc.  
*Electrical Contractor:* Fast Electric Company

### Como Elementary School

*Architect:* Edward Kromer  
*Addition:* \$134,000  
*General Contractor:* Harry E. Miller  
*Mechanical Contractor:* Doersam Company  
*Electrical Contractor:* McCarty Brothers

### Crestview Junior High School

*Architects:* Freshwater & Harrison  
*Addition:* \$191,859  
*General Contractor:* G. C. Miller Construction Company  
*Mechanical Contractor:* Piping Contractors Company  
*Electrical Contractor:* Superior Electric Company  
*Alterations:* \$86,902  
*General Contractor:* C. C. Vogel Company  
*Mechanical Contractor:* The Gesling Company  
*Electrical Contractor:* McCarty Brothers

### Deshler Elementary School

*Architect:* Edward Kromer  
*Addition:* \$73,379  
*General Contractor:* Wagenbrenner Construction Company  
*Heating Contractor:* A. A. Doersam, Jr.  
*Plumbing Contractor:* Piping Contractors Company  
*Electrical Contractor:* S. & S. Electric

### Eastwood Elementary School

*Architect:* Dan A. Carmichael  
*Alterations:* \$141,103  
*General Contractor:* Krause & Pagura, Inc.  
*Heating Contractor:* Limbach Company  
*Plumbing Contractor:* Piping Contractors Company  
*Electrical Contractor:* McCarty Brothers

### Everett Junior High School

*Architect:* Louis F. Karlsberger  
*Alterations and addition:* \$402,338  
*General Contractor:* General Maintenance & Engineering Company  
*Mechanical Contractor:* The Gesling Company  
*Electrical Contractor:* McCarty Brothers

### Fairmoor Elementary School

*Architects:* Brooks & Coddington  
*Alterations:* \$256,360  
*General Contractor:* H. C. Hummer Company  
*Mechanical Contractor:* The Doersam Company  
*Electrical Contractor:* Kennedy Electric

### Glenmont Elementary School

*Architect:* Edward Kromer  
*Additions:* \$81,974  
*General Contractor:* F. S. Cupp Construction Company, Inc.  
*Mechanical Contractor:* J. A. Guy, Inc.  
*Electrical Contractor:* McCarty Brothers

### Heyl Elementary School

*Architect:* Warren L. Smith  
*Additions:* \$108,932  
*General Contractor:* G. W. Atkinson and Son  
*Mechanical Contractor:* J. A. Guy, Inc.  
*Electrical Contractor:* McCarty Brothers

### James Elementary School

*Architects:* Crumley & Musson  
*Additions:* \$180,418  
*General Contractor:* H. C. Hummer Company  
*Heating Contractor:* Columbus Heating and Ventilating Company  
*Plumbing Contractor:* The Gesling Company  
*Electrical Contractor:* Blum Electric, Inc.

### Oakland Elementary School

*Architect:* Edward Kromer  
*Additions:* \$80,880  
*General Contractor:* G. C. Wagenbrenner Construction Company  
*Mechanical Contractor:* Grif M. Lewis  
*Electrical Contractor:* McCarty Brothers

### West Mound Elementary School

*Architect:* Edward Kromer  
*Additions:* \$82,602  
*General Contractor:* C. C. Vogel  
*Mechanical Contractor:* Grif M. Lewis  
*Electrical:* McCarty Brothers

## New Schools

### Clinton Junior High School

*Architect:* Dan A. Carmichael  
*Cost:* \$1,175,046  
*General Contractor:* F. & Y. Construction Company  
*Heating Contractor:* The Gesling Company  
*Plumbing:* Wuellner and Theado  
*Electrical Contractor:* Persha Electric Company

### Dominion Junior High School

*Architect:* Dan A. Carmichael  
*Cost:* \$1,187,735  
*General Contractor:* G. W. Atkinson & Son  
*Mechanical Contractor:* The Doersam Company  
*Electrical Contractor:* Persha Electric Company

(Continued on Page 26)



Come On Along! Come On Along!

## Mark Your Calendar Now!

### THE 22nd ASO CONVENTION AND MATERIALS EXHIBIT

This is your Convention! Planned for you it will give you knowledge and information that will enable you to serve yourself and your client better.

Be sure to attend. You'll see one of the finest Exhibits of Building Products ever displayed. You'll participate in programs that will increase your effectiveness as an architect and as an important citizen of your community.

October 19-21

Hotel Carter

Cleveland, Ohio



#### PUBLICITY AND YOU

This program is aimed to give you the FACTS about practical, down-to-earth relations with newspapers and trade magazines. Mr. John Knox Shear, AIA, and Editor-in-Chief of Architectural Record will be one of the speakers.

#### NELA PARK PARTY

General Electric and the Ohio Electric Utilities Institute has gone all out to give you a program that will be interesting and help you in your profession. Taking place at the world famous G. E. Lighting Institute, this program will be followed by a Social Hour and Banquet.

#### PRESIDENT'S RECEPTION AND BANQUET

This Annual function gives you the opportunity to know your officers and convention guests better. It keynotes the Society activities for the coming year.

#### OPERATION DEMONSTRATE

This project points the way for Urban Rehabilitation. Receiving nationwide publicity, it's something you, as an architect, must see.

#### ASO BUSINESS MEETING

Here is your chance to participate in the direction and guidance of your state Society. This is important to you as a professional man. Don't let "George" do it. YOU DO IT!

#### ICE BREAKER PARTY

This is where you renew old friendships and meet new friends. Be sure to hear "Spike" Guy and His Rusty Nails.



# Ladies Program Highlights

## ASO Convention

A special luncheon is planned at Wade Park Manor. Brunch at Westwood Country Club will be followed by a Fashion Demonstration presented by Miss Elizabeth Kardos, Director of the Kardos Fashion Institute.

A visit to Cleveland's Fine Arts Garden and Center is one of the attractions for all wives of architects and guests.

All ladies are invited to attend the "Ice-Breaker" Party, the Nela Park Party, and the President's Reception and the Banquet with the men.

All ladies will want to take a relaxing boat trip up the Cuyahoga river on the "Diane." (Convention Chairman George Mayer emphasizes that the "Diane" is a boat — not a Hurricane!)

A trip to Westgate, Cleveland's finest Shopping Center is an attraction no woman will miss. (Unless the Chancellor of the Exchequer hides the checkbook.)

### *Our Readers Write*

It was ever-so-nice to receive the copy of the new OHIO ARCHITECT. Thanks for sending it.

You are undoubtedly well pleased with the results of your combined effort — and you should be. The magazine seems to us to be a fine one.

**VERNA M. SHERMAN**  
The Florida Architect

We wish to thank you for the interesting July 1955 issue of OHIO ARCHITECT which we received recently.

**HELEN N. HILDNER**  
Oberlin College Library

We wish to thank you for the fine article in the August issue on the O'Neil-Sheffield Center. As we have already told your Cleveland correspondent, Mr. Rimer, we feel it was very well handled.

Will you please inform us how we can secure additional copies? We have had a number of requests for copies from people connected with the project and from others, both within the office and outside, and should like to have twenty copies. We shall be glad to pay for them, of course.

**WALLACE G. TEARE, AIA**

### Building Permit Fees

Mr. Charles L. Pettibone, Assistant Director of the Department of Industrial Relations, has informed the ASO that effective October 6, 1955 building permits will be issued with the approval of all plans and specifications as required to be approved under Section 3791.04 of the Revised Code of Ohio.

Application blank for building permits may be secured by writing to:

Division of Workshops and Factories  
Room 221  
Department of Industrial Relations  
State of Ohio  
Departments of State Building  
Columbus 15, Ohio

Also, Building Permit Fees will be charged in accordance with Am. Sub. H. B. 580, Section 3791.07, passed June 24, 1955 by the General Assembly, which reads:

Sec. 3791.07. The fee for the inspection of plans required to be submitted to the division of workshops and factories for approval under section 3791.04 of the Revised Code, shall be charged at the rate of ten dollars per structure, plus seventy-five cents per each one hundred square feet of floor surface, including basement, cellar, or sub-cellar floors, measuring the outside dimensions of the building at each floor level.

### Britsch Macelwane & Associates

A new architectural firm of Britsch, Macelwane & Associates was announced by Carl C. Britsch, AIA, and John P. Macelwane, AIA. Offices have been established at 2450 Sylvania Avenue, Toledo. Frank E. Poseler, present Treasurer of the Toledo Chapter, AIA, is associated in the partnership.

Mr. Britsch, formerly associated with Harold H. Munger, is a Past-President of the Architects Society of Ohio and is prominent in Toledo art circles, including the Toledo Artists Club.

Mr. Macelwane, formerly associate member of the firm of Britsch and Munger, is currently Second Vice-President of the Architects Society of Ohio and a member of the Ohio Board of Building Standards.

### Toronto, Ohio

Architect for Toronto's new \$500,000 S. C. Dennis Elementary School is Joseph Hoover, Pittsburgh. The architecture is contemporary in style, dictated by a functional plan, arranged to provide the most desirable locations for the several services and activities essential to the proper operation of an elementary-junior high school. The general contract was awarded to the Groomes Corp., Cheswick, Pa.



**"Should Your Child Be An Architect?"**

"In all likelihood, your son will never make a fortune as an architect. Very few men do. But he can acquire another type of wealth that will probably mean more to him than all the money in the United States Treasury.

Again and again, if he goes in for architecture, your son will experience the kind of thrill that came to a young man I know. This chap was attending the opening ceremonies of a hospital he'd designed for a large mid-western city — it was his first big job — when he saw a poorly dressed woman crying.

"What's wrong, lady?" he asked.

"I'm so happy," she wept. "They're transferring my husband here from one of the old hospitals, and I just know he can get better in a place as beautiful as this."

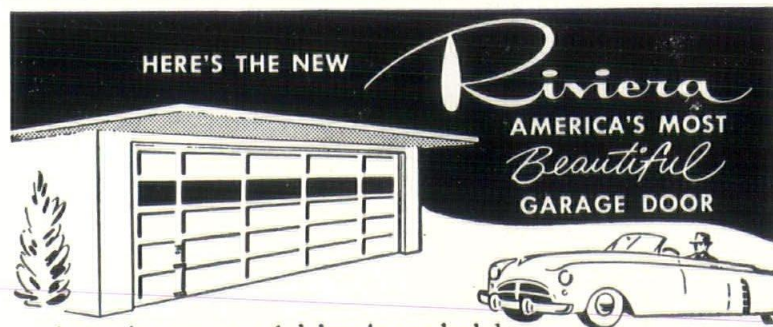
And your son will often get the sort of thrill an architect friend of mine had after he designed a new church on the Pacific Coast. One of the parishioners came up to him and said, "Your church makes me feel near to God."

Moments like that cannot be measured in dollars."

The above are quotations from a very interesting six-page brochure by Pietro Belluschi, Dean of Architecture and Planning, Massachusetts Institute of Technology. It is a very informative pamphlet for any student who has developed an interest in architecture as a profession. Copies are available on request. Write the New York Life Insurance Company, 51 Madison Avenue, New York 10, N. Y.

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**Munger Munger &  
Associates**

A new firm, Munger Munger and Associates, a father and son architectural partnership, was announced by Harold H. Munger, FAIA, senior member. Harold C. Munger and Byron F. Killinger and a staff of ten others form the new group. Offices are located in the National Bank Building, Toledo.

Harold H. formerly was associated as a partner with Carl C. Britsch in the firm of Britsch & Munger. Mr. Munger was awarded a fellowship in the American Institute of Architects in 1952. He was president for two terms of the local chapter of the AIA, and has been a member of the Ohio State Board of Examiners of Architects for the past ten years, serving twice as president.

Harold C., as is his father, is a graduate of the University of Notre Dame where he won the Sollitt prize, a senior award made for excellence in design and construction. He worked in the Atomic Energy Commission branch of Giffels and Vallet, Detroit, architects and engineers before coming to Toledo in 1952. He is a member of the AIA and is associate editor of the monthly publication of the Architects Society of Ohio.

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Mr. Killinger has been in the architectural field over 40 years, and has been associated with Mr. Munger since 1945 as chief draftsman. An AIA member, he has served several terms as treasurer of the Toledo chapter.

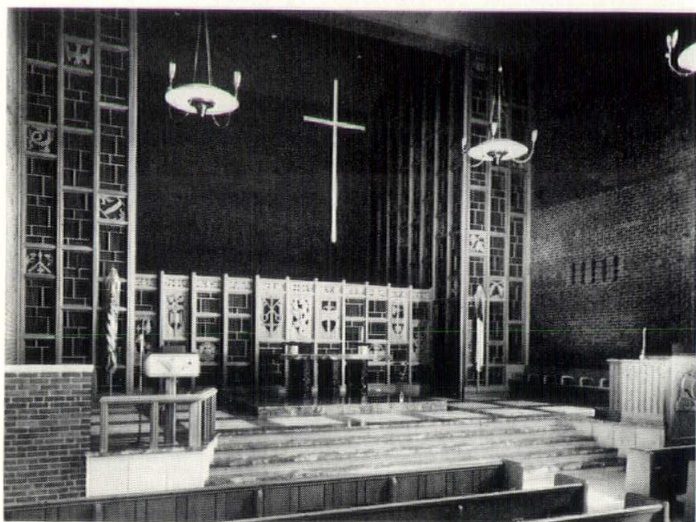




This is your  
Convention Chairman  
He is Watching You

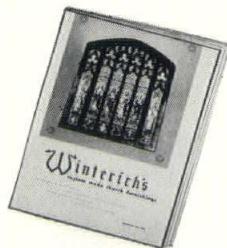
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see our catalog in



or write for copy

(Cincinnati Chapter continued)

The American Institute of Architects actually is full of new blood. The membership has risen in numbers and is steadily gaining strength. The AIA is the only unified and progressive organization that Architects have. To help direct its course, you must be a member actively working within your Chapter and the State Society, and we all know that every chapter welcomes willing workers. You could never help the team by yelling from the sidelines. *Come on in and pitch!*

(Cleveland Chapter continued)

Television, *Life* magazine and the National Council to Improve Our Neighborhood will publicize this venture.

Only time will tell if this development will result in a sound neighborhood improvement program, of which Cleveland will be proud.

### AIA Backs "Ohio Home" Contest

Howard Cain, AIA, has announced the second annual "Ohio Home" contest for a winning design which will be constructed at the 1956 Home and Flower Show to be held in Cleveland. Complete details of the competition appear elsewhere in this issue.

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### Proposed New Buildings (Cont'd)

Lima, \$1,100,000; Lodi, \$211,000; Lorain, \$910,000; Loveland, \$216,000; Lowellville; McARTHUR, \$215,000; McDonald; Madeira, \$211,000; Madison, \$225,000; Mantua, \$211,000; Marblehead, \$211,000; Marietta, \$830,000; Marion, \$905,000.

Martins Ferry, \$290,000; Mason; Massillon, \$785,000; Masury; Mentor, \$280,000; Middlefield, \$230,000; Middletown, \$1,245,000; Mogadore, \$230,000; Monroeville; Morrow, \$240,000; Mount Orab, \$211,000.

Mount Sterling, \$211,000; NAVARRE; New Carlisle, \$215,000; New Lebanon; New Richmond; Newton; New Washington; North Baltimore, \$215,000.

Northfield; North Ridgeville, \$207,000; North Royalton; OAK HILL; Olmsted Falls, \$215,000; Orwell; PATASKALA, Pemberville; Plain City, \$211,000; Pleasant Hill, \$230,000; Plymouth, \$215,000.

Poland, \$215,000; Prospect; RICHWOOD, \$211,000; Ripley, \$225,000; Rittman; Rockford; Rossford, \$215,000; Rossmoyne, \$235,000; ST. CLAIRSVILLE, \$250,000.

St. Paris; Salem, \$335,000; Scio; Sharonville, \$211,000; Smithville, \$211,000; Solon, \$211,000; Somerset, \$215,000; South Zanesville; Spencer, \$218,000; Spencerville; Stow; Strasburg; Strongsville; Stryker, \$220,000.

Sugarcreek, \$211,000; Sunbury, \$211,000; TALMADGE, \$215,000; Tiffin, \$815,000; Toronto, \$210,000; Trotwood; Twinsburg; UTICA; VANDALIA, \$225,000; Vermillion, \$245,000; Versailles, \$225,000; WASHINGTON Court House, \$510,000; Waterville, Wayne.

Waynesburg; Waynesville; Wellington, \$235,000; Wellsville, \$235,000; West Alexandria; West Carrollton; \$225,000; West Lafayette, \$215,000; Westlake, \$211,000; West Liberty; Weston; West Richfield; West Union, \$220,000; West Unity; Wilberforce.

Williamsburg, \$211,000; Windham; Woodville, \$211,000; YORKVILLE; Youngstown, \$1,910,000.

### Columbus School Projects (Cont'd)

#### Eastmoor Junior-Senior High School

*Architects:* Benham, Richards & Armstrong

*Cost:* \$1,554,925

*General Contractor:* James I. Barnes Construction Company

*Heating Contractor:* Piping Contractors Company

*Plumbing Contractor:* The North Side Plumbing & Heating Company

*Electrical Contractor:* McCarty Brothers

(Continued next column)

## Calendar for Architects

- September 4-24: Arts and Crafts of Japan, Main Lounge, The Ohio Union, OSU, Columbus.
- September 15-30: Exhibition of British sculpture, Cincinnati Art Museum.
- September 25-October 15: Award Winning Pieces — "Young Americans, 1955", sponsored by the American Craftsmen's Educational Council. Main Lounge showcase, The Ohio Union, OSU, Columbus.
- October 7: Producers' Council Caravan, Commodore Perry Hotel, Toledo.
- October 19-21: Architects Society of Ohio Annual Convention and Materials Exhibit. Joint meeting with Great Lakes Region, AIA, Hotel Carter, Cleveland.
- October 27: Columbus AIA Chapter Meeting, Joint meeting with Student Chapter, AIA, OSU. Theme: Architectural Education.
- November 16-17: School Plant Conference. Theme: Planning the Secondary School — 1960 and Beyond, The Ohio State University, Columbus.
- November 17: Columbus AIA Chapter Meeting. Theme: Public Relations.
- December 6: Producers' Council Caravan, Hotel Statler, Cleveland.
- December 12-13: Producers' Council Caravan, Netherland Plaza, Cincinnati.
- December 15: Columbus AIA Chapter Meeting, Annual Banquet and election of officers.

#### Hilltonia Junior High School

*Architect:* Dan A. Carmichael

*Foundations only:* \$99,988 (Still out for bid)

#### Huy Elementary School

*Architect:* Edward Kromer

*Cost:* \$427,147

*General Contractor:* The Miller Construction Company

*Mechanical Contractor:* Grif M. Lewis

*Electrical Contractor:* McCarty Brothers

#### Northridge Elementary School

*Architect:* Edward Kromer

*Cost:* \$290,254

*General Contractor:* F. S. Cupp Construction Company

*Mechanical Contractor:* Roland A. Esswein

*Electrical Contractor:* Persha Electric Company

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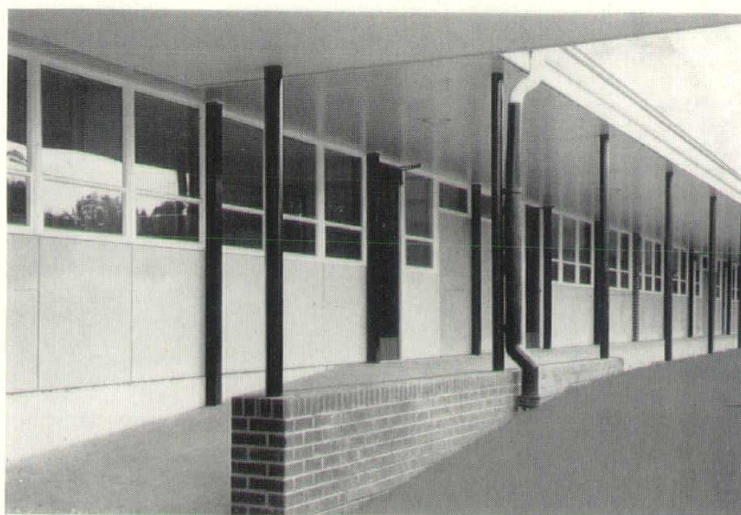
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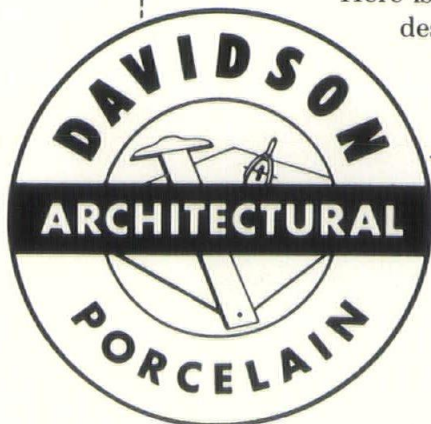
Davidson "Double-Wall" Curtain Wall panels were used in this school offering simplicity of design, economy and practicability.

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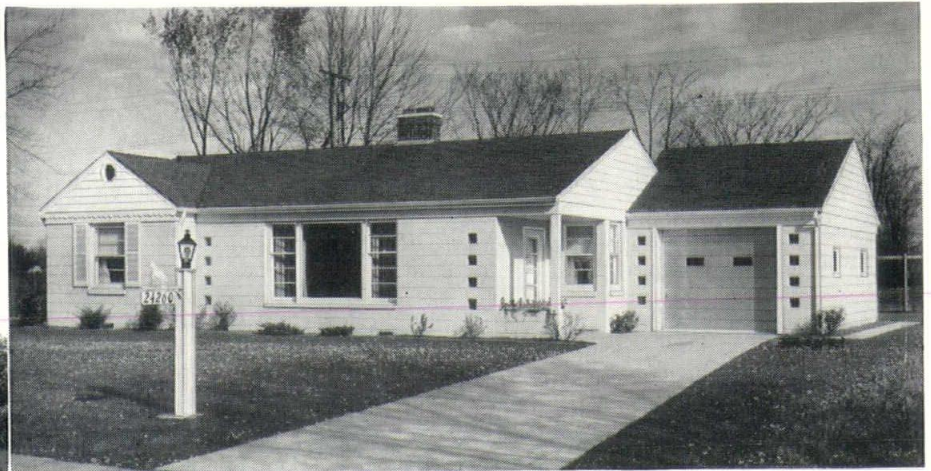
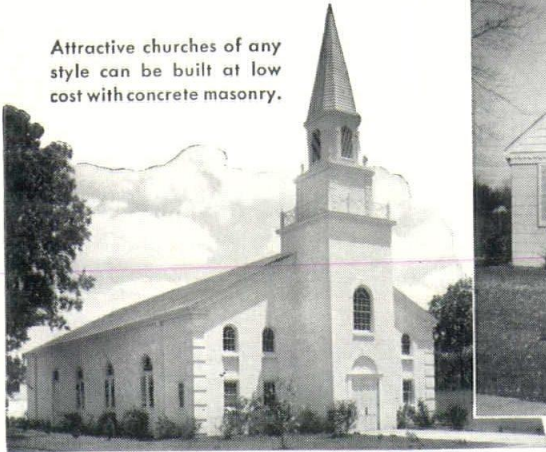


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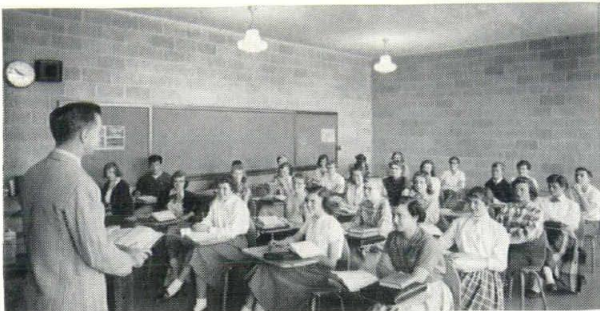
**Davidson ENAMEL PRODUCTS, INC.**  
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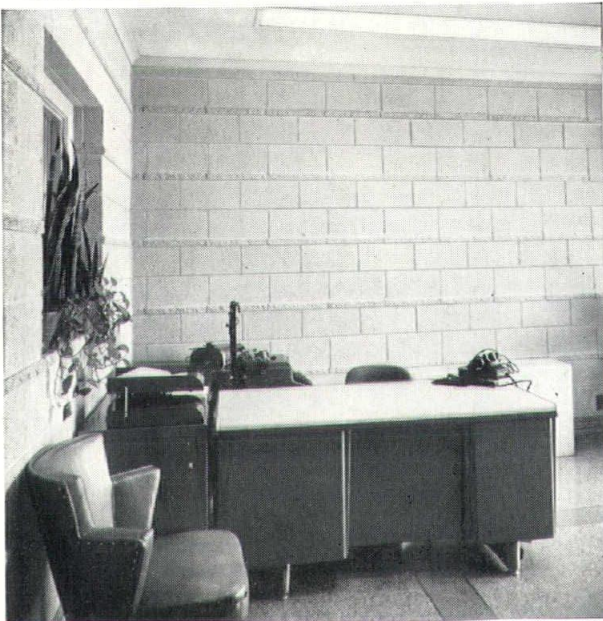
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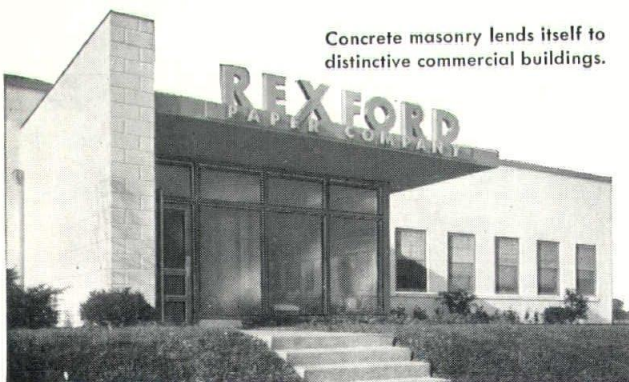
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