Specify electric heating and reduce the school's capital investment!

Modern electric heating offers many savings... both in the system and in the structure.

Here's how modern electric heating can help you reduce the capital investment in a school, or make it possible for you to provide more classrooms and better facilities. Electric heating is the only heating system which does not require a boiler room, a smoke stack, pipe tunnels, and coal bins or storage tanks.

There are other savings, too. Electric heating equipment costs less than the equipment for any other type of heating. And installation costs are also far lower. In fact, the initial cost of an electric heating system is so low, it is less than the plumbing cost alone for another type of heating. The operating cost is also low—ask to see our files containing actual case histories.

And here's a bonus saving! It is a simple task to expand the system or to add air conditioning to any room or rooms—now or at a later date.

Call or write I&M for more information. We will also be happy to supply you with free technical information on electric heating for any institutional, commercial or industrial building.
ARCHITECTS and building engineers with discriminating taste and a knowledge of construction values have found the TEE-JOIST SYSTEM to be the very finest. In addition the system offers a major contribution to efficiency and all-around economy in construction, as well as combines the advantages of precast and cast-in-place methods.

Ceilings may be flush or handsomely recessed with precision-ground, light-weight filler block between load-bearing, factory cast concrete TEE-JOIST... all covered with a steel reinforced concrete slab to form a floor or roof. It's light and strong... cuts deadweight load without cutting strength. Saves materials, manpower and money, too. Compare and see for yourself the many advantages of this superior system. Call today for the facts.
OVERLY FIRE BARRIER WITH CONCEALED HARDWARE PASSES U/L FIRE TEST!

Panic-Free Fire Doors with aesthetic advantages are now available to the architect as a result of a recent U/L fire test. A pair of Overly Fire Barriers, equipped with concealed Von Duprin Hardware, have just successfully passed a test for 1 1/2 hours of fire resistance at Underwriters' Laboratories. The test was conducted on 8' x 7' fire doors.

This new fire test follows an earlier test conducted last year in which a pair of Overly Fire Barriers with surface-type panic hardware passed a 3-hour U/L fire test.

As a result of these tests, the architect may now specify Overly Fire Barriers with concealed or surface-type hardware, for periods of fire resistance from 1 1/2 to 3 hours. With the concealed hardware, he has the advantage of better design aesthetics as well as protection from panic and fire in areas up to four units of exit.

For more information, write for the 1962 Overly Hollow Metal Doors and Frames Catalog.

* * *

Doors and Frames in Time is what you get with the new Overly Speedline Program, that offers the architect 14 custom Overly door styles and hundreds of frame designs in an expedited 72-hour shipment service. For more information, write for the Overly Speedline Catalog.

* * *

Did You Know that there is a preference for colonial style church spire designs in the South and far more contemporary designs in New England? That's what we've learned from a review of our church spire orders. Are you interested in church spires? If so, write for our new 1962 Spires and Crosses Catalog.

Greensburg, Pa. • St. Louis 19, Mo. • Los Angeles 39, Calif.

Overly Representative In Your Area:
HUGH J. BAKER & COMPANY
602 West McCarty Street
Indianapolis 6, Indiana

...the continuous quality control system in the manufacture of Arketex Ceramic Glazed Structural Tile

HE CUTS YOUR BUILDING COSTS...

by being right the first time!

When your materials are right the first time, your craftsmen work better, and you make more money. That's why Arketex takes an extra step in the manufacture of its structural facing tile. Each 8" x 16", 8W unit goes through a fettling, or final finishing process. It is carefully sanded to produce true edges and uniform dimensions. As a result, Arketex tiles lay easily and smoothly into clean alignment — particularly important on patterned walls to which Arketex tile lends itself so well. You end up with lower in-wall costs and a better-satisfied customer.

For free literature on the widening uses of structural facing tile, write to

ARKETEX CERAMIC CORPORATION
Brazil, Indiana
For Concrete Masonry Surfaces....
to enhance Interior Decor, specify
PLEXTONE® with its Multi-color
Textured Accent Colors... Large
Particle Size --

* School Buildings
* Hospitals
* Industrial Buildings
* Motels

Distributed By
PERFECTION PAINT & COLOR
715 E. MARYLAND — INDIANAPOLIS, IND.
ME 2-4312

Modern Built-Ins
Cook with GAS

And they're the last word in modern styling. Whatever the design or style of the kitchen, a GAS built-in range will add the crowning touch.

Now available in a wide variety of burner arrangements and models, Gas built-ins offer all of the up-to-the-minute features that make conventional, free-standing gas ranges so popular with today's homemakers.

Only Gas offers the "burner-with-a-brain" (temperature-controlled top burner) and the new low temperature oven control (temperature control down to 140) — and now it's all available in built-in models.

Specify GAS for economical, dependable, automatic cooking

INDIANA GAS and WATER COMPANY, INC.
LIVE MODERN, FOR LESS, WITH GAS
The profession of architecture calls for men of the highest integrity, judgment, business capacity, and artistic and technical ability. An Architect's honesty of purpose must be above suspicion; he acts as professional adviser to his client and his advice must be unprejudiced; he is charged with the exercise of judicial functions as between client and contractors and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; he is engaged in a profession which carries with it grave responsibility to the public. These duties and responsibilities cannot be properly discharged unless his motives, conduct and ability are such to command respect and confidence.

Planning, technical guidance, advice and counsel constitute the service of the profession. Given in verbal, written or graphic form, they are rendered in order that buildings with their equipment and the areas about them, in addition to being well suited to their purposes, well planned for health, safety, efficient operation and economical maintenance, and soundly constructed of materials and by methods most appropriate and economical for their particular uses, shall also have beauty and distinction.

Every member of The American Institute of Architects must subscribe to fifteen mandatory standards of professional practice, standards that have been adopted to insure that every client receives the finest professional service available. These standards are:

1. An Architect shall not accept any compensation for his services other than from his client or employer.

2. An Architect shall not render professional services without compensation. He shall neither offer nor provide preliminary services on a conditional basis prior to definite agreement with the client that if the contemplated project proceeds, he will be employed as its Architect.

3. An Architect shall not knowingly compete with another Architect on a basis of professional charges, nor use donation as a device for obtaining competitive advantage.

4. An Architect shall not offer his services in a competition except as provided in The Institute's Competition Code; in international competitions originating in the United States except as approved by The Institute and the International Union of Architects; and in foreign international competitions except as approved by the International Union of Architects.

5. An Architect who has been retained as a professional adviser in a competition shall not accept employment as an Architect for that project.

6. An Architect shall not render architectural services to non-professional enterprises connected with the building industry, except when (a) he does not either directly or indirectly solicit orders for the said enterprises, and (b) he is paid by salary, fee or royalty for his architectural services and does not participate in any profits of the aforesaid enterprises which would influence his professional integrity.

7. An Architect shall not engage in building contracting.

8. An Architect shall not knowingly injure falsely or maliciously, the professional reputation, prospects or practice of another Architect.

9. An Architect shall not attempt to supplant another Architect after definite steps have been taken by a client toward the latter's employment.

10. An Architect shall not undertake a commission for which he knows another Architect has been employed until he has notified such other Architect of the fact in writing and has conclusively determined that the original employment has been terminated.

11. An Architect in soliciting work shall not divide fees except with professionals related to building design, and those regularly employed or known to be associated with his office.

12. An Architect shall not use paid advertising nor use self-laudatory, exaggerated, or misleading publicity. Factual materials, verbal or visual, which dignify the profession or advance public knowledge of the Architect's function in society may be presented through public communication media.

13. An Architect shall not solicit, nor permit others to solicit in his name, advertisements or other support toward the cost of any publication presenting his work.

14. An Architect shall conform to the registration laws governing the practice of architecture in any state in which he practices and he shall observe the standards of practice established by the local Architects' professional body.

15. An Architect shall at no time act in a manner detrimental to the best interests of the profession.
Programs have been distributed to all high schools in the state of Indiana, and to date applications have been received from forty-two students. As noted on the map, they have come from each of our six districts as well as the Northern Indiana Chapter area. It is probable that additional applications will be received during the next few months.

More than ninety I.S.A. members and other architects within the state have been asked to cooperate by meeting these young men and discussing the profession with them. The committee requests that this important part of the program be willingly accepted by each architect contacted.

Although the amount of money on hand is sufficient to begin this Scholarship, additional funds must be obtained to insure its continuation. The committee hopes that those interested in the program will make generous gifts.

—ISA Scholarship Committee
COMMENTS . . . regarding the ISA Scholarship Program

"On behalf of Dean Pickering, our School, these young men, and myself, I wish to commend and thank you for making this opportunity possible."

Mathias J. Noheimer, Director of Admissions,
University of Cincinnati

"Congratulations to your Chapter on having instituted this program."

Phillip N. Youtz, FAIA, Dean,
University of Michigan

"This certainly is a worthwhile endeavor and my congratulations . . . for making this possible. I hope the publicity sent to me will reach, and will be posed, in the various high schools throughout Indiana."

Granville S. Keith, Chairman, Dept. of Architecture,
University of Illinois

"I would like to congratulate The Indiana Society of Architects for establishing an architectural scholarship. I agree with you that the most important thing any of us can do for the profession is to encourage good students to come into architecture."

Joseph R. Passonneau, AIA, Dean,
Washington University
St. Louis, Missouri

"You are to be congratulated for this program."

William H. Wilson, Associate Professor,
Chairman, Scholarship Committee,
University of Oklahoma

"This is a most worthwhile program and your Society is to be highly commended for making such assistance available."

Theo R. Holleman, Professor,
Head of Division of Architecture,
A & M College of Texas

"The Indiana Society of Architects is indeed to be congratulated for its foresight in taking this step."

D. Kenneth Sargent, FAIA,
Dean, School of Architecture,
Syracuse University, N.Y.

"In view of the spiraling cost of education today, your scholarship is an important opportunity for students considering architecture. I am pleased to hear of its establishment and hope that this first year is a successful one.

Kenneth A. Smith, Asst. Dean,
Columbia University
Can you spare 60 seconds to take an ...

ARCHITECTURAL QUIZ

Cement Lime Mortar — Versus — Masonry Cement Mortar

To properly evaluate this subject it is first necessary to clear up misconceptions.

We suggest that you take the following quiz. If you are not positive of all the answers . . . the information contained in the next four pages will be of valuable help to you.

QUESTION  

1. Leaky brick walls result from mortar shrinkage?  
   □ True □ False

2. Expansion of mortar is never a problem?  
   □ True □ False

3. Masonry cements are patented mixtures; there are no specifications to control their properties?  
   □ True □ False

4. Any bagged lime is suitable for mortar?  
   □ True □ False

The explanations of these and many other questions are contained in the article “MORTAR FOR UNIT MASONRY.” May we suggest that YOU make a study of this article. You may also find this sheet to be a useful addition to your technical file on mortars.

PORTLAND CEMENT ASSOCIATION

612 MERCHANTS BANK BUILDING  
INDIANAPOLIS 4, INDIANA

A national organization to improve and extend the uses of portland cement and concrete through scientific research and engineering field work
CONSISTENT RATE OF HARDENING--The rate of hardening of mortar is the speed at which it develops resistance to indentation and crushing. It is sometimes confused with a stiffening caused by rapid loss of water (as in the case of low water retention mortars or highly absorptive units). Too rapid hardening may interfere with the use of the mortar by the mason. Overly slow hardening may impede the progress of the work. Slow hardening also may subject the mortar in winter to early damage from frost action. A well defined, consistent rate of hardening assists the mason in building the wall and in tooling the joints at the same degree of hardness and thus obtaining a uniform joint color.

STRENGTH--The strength of the mortar as it is used in this article and in common practice refers to the compressive strength. Confusion sometimes arises when compressive strength, or shear strength, or tensile strength, or tensile bond strength of the mortar to the unit are not properly defined and are used carelessly in the same discussion.

There is much controversy over whether mortars should be very weak or very strong in compression or something in between. The controversy centers over a continual attempt to achieve crack-free masonry. For every person who says that weak mortar will be conducive to fewer cracks, another will say just the opposite. In the opinion of many, research and field experience to date fail to make a strong case for either viewpoint.

There are few reports of structural distress or failures due to compressive loading and laboratory tests show that the compressive strength of walls is not greatly sensitive to mortar strength. Therefore, it is not important to use greater than moderate strength mortars for general construction.

BOND--Bond may refer to (a) the force required to separate two masonry units (tensile bond strength as mentioned above) or to (b) the extent of bond as measured by the degree of contact of the mortar with the units. Actually neither the extent of bond nor tensile bond strength is simply a property of the mortar alone; both depend more on the surface physics (texture, absorption, etc.) of the masonry units and the workmanship of the mason.

Strength of bond measurements of similar materials in repeated laboratory tests show large unexplainable variations. Certain investigators have concluded that, in general, and always assuming a workable mortar, bond strengths increase with increases in compressive strength, portland cement content and increased flow of the mortar. Because of many variables and low values, tensile bond strengths are not a factor in most designs and building codes.

Good extent of bond (complete and intimate contact), however, is important to water-tightness as well as affecting the tensile bond strength.

Good extent of bond is obtained with a workable, water-retentive mortar good workmanship, full joints and masonry units that have a medium initial rate of suction.

LOW VOLUME CHANGE--It is popularly believed that mortar shrinkage can be extensive and can cause leaky walls. Actually, the maximum possible shrinkage in a mortar joint is so small that any resultant crack could not be seen with the naked eye.

Much research and field observations have shown that good workmanship, good design and good units are necessary to obtain a watertight wall. Shrinkage of mortars that have a good balance of all desirable properties is insignificant.

Expansion due to unsound ingredients has caused serious disintegration of masonry in the past. Soundness can be measured by an autoclave expansion test which requires that a 1"x1" bar of 10" length be made of the cementitious material and subjected to high pressure steam for a specified time. This treatment produces reactions in any unsound ingredients. If unsound materials are present in a great amount, the bar will expand more than the allowable and indicate potentially harmful expansion of the material in the wall.
MORTAR FOR UNIT MASOINY

***

A brief explanation of the important properties and practices necessary for quality mortar.

***

Mortar for unit masonry is often specified and prepared with thought and skill.

Still, some construction men, of the opinion that mixing a good mortar is "more an art than a science" give little concern to the preparation of this important material.

Others, caught in a controversy, find the subject confusing.

To stir the apathetic and help the confused, some of the knowledge developed by practical observers and laboratory scientists over the years follows in abbreviated form.

Mortar is a combination of one or more cementitous materials, a clean well-graded sand and enough pure water to give a plastic, workable mix. The materials and their proportions should be chosen to give the mortar a good balance of these desirable properties:

WORKABILITY--A workable mortar is uniform, cohesive and of a consistency that makes it "usable" to a mason. A workable mortar is easy to spread, holds the weight of the units, makes alignment easy, clings to the vertical faces of masonry units, and readily extrudes from the mortar joint but does not drop or smear. Its particles do not segregate.

WATER RETENTION--Water retention is that property that prevents rapid loss of mixing water (hence, prevents loss of plasticity) when the mortar contacts an absorptive masonry unit. Also, when the mortar is in contact with a masonry unit of low absorption, a high degree of water retention prevents floating of the unit due to "bleeding." Water retention is measured in the laboratory by the "flow after suction" test which simulates the action of absorptive masonry units. Since water retention is an important property and is correlated to workability, it is usually mentioned in mortar specifications.

DURABILITY--The durability of a mortar is measured principally by its ability to resist repeated cycles of freezing and thawing under natural weather conditions. High compressive strength mortars usually give good durability, but a more important factor is that the mortar should have entrained air.

Each cubic foot of air-entrained mortar contains billions of minute, well-distributed and completely separated air bubbles. These bubbles absorb the expansive forces of freezing water. Recent laboratory tests show that mortars with adequate air-entrainment withstand hundreds of freeze-thaw cycles, while other mortars soon spall or fail.

APPEARANCE--Uniformity of color of the joints greatly affects the overall appearance of the masonry structure. Atmospheric conditions, moisture content of the masonry units and admixtures influence the shade of the mortar joints. Probably the most important factors are controllable: uniformity of the mix and time of tooling of the mortar joint.

Careful measurement of materials and thorough mixing are important to uniformity from batch to batch and from day to day. Control of this uniformity becomes more difficult when more than one cementitious material is used.

If the mason tools the joint when the mortar is relatively hard he will get a darker shade than if he tools the joint when the mortar is relatively soft. Thus, tooling the joints at like degrees of mortar hardness is important to a uniform color.
In addition to properties above, permeability is sometimes mentioned. Much research has shown that when masonry walls leak, water does not pass through the mortar, but rather through fine cracks and openings. Therefore, except for special instances where the masonry may be subjected to hydrostatic pressures, permeability of all mortars in common use is closely alike and not considered an important factor.

How do the three cementitious products—lime, portland cement and masonry cement—contribute to the desirable properties?

Limes impart workability and water retention to a mortar mix. When using a hydrated lime (a hydrated lime is added to the mortar as it comes from the bag rather than slaking for a period of time) ASTM Designation C 207-Type S is recommended. Specifications for Type S place a limit on the amount of unhydrated particles.

Straight lime mortars harden at a slow, variable rate, develop low compressive strength and poor durability to the freeze-thaw cycle.

Portland cement will harden in the presence of water at a consistent rate, develop high compressive strengths and good durability. Straight portland cement mortars, however, are low in workability and water retention.

Considering a good balance of all the desirable properties in mortars, it is obvious then why combinations of portland cement and lime developed. Over the years experience led to relative standardization in most specifications on a 1:1:6 mix (portland cement, lime and sand by volume).

Recently, masonry cement mortars proportioned one part masonry cement (ASTM C 91, Type II) to a maximum of three parts sand have come into extensive use. Masonry cements produced by portland cement manufacturers are designed to improve and simplify the mortar mix by combining materials in one package under careful control. The proportions of the materials (such as portland cement, natural cement, finely ground limestone or Type S hydrated lime) in a bag of masonry cement are chosen to give a good balance of all the desirable properties. These desirable properties are enhanced by additions of an air-entraining agent and gypsum to regulate the time of set.

Masonry cement mortars are considered to have three principal advantages:

1. Because the materials are inter-ground before they enter the package, the uniformity of the mix is not so dependent upon working conditions as for the job mixed combinations. As a result, the mortar from batch to batch and day to day is consistent in quality and appearance.

2. By ASTM and Federal Specifications, masonry cements are required to entrain a minimum of 12 per cent air. With proper job mixing, air-entrainment insures a high degree of durability to the freeze-thaw cycles and contributes to the workability, cohesiveness, plasticity and water retention of the mortar. Air-entraining agents are added in measured quantities during manufacture. For proper air content in job mixed portland cement-lime mortars, an air-entraining agent would need to be added at the job and the mix would have to be checked regularly with an air meter.

3. ASTM Designation C 91, "Standard Specifications for Masonry Cement," limits the autoclave expansion to not more than one per cent. Tests have shown masonry cement mortars to be well below this limit. This is a guarantee against unsound material. There is no such guarantee in portland cement-lime mixes.

RECOMMENDED MASONRY CEMENT MORTAR MIXES
(proportions by volume)

<table>
<thead>
<tr>
<th>Type of service</th>
<th>Cement</th>
<th>Mortar sand in damp, loose condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>For regular service</td>
<td>1 masonry cement</td>
<td>2-1/4 to 3</td>
</tr>
<tr>
<td>Subject to extremely heavy loads, violent winds or earthquakes, Isolated piers.</td>
<td>1 masonry cement plus 1 portland cement</td>
<td>4-1/2 to 6</td>
</tr>
</tbody>
</table>
SAND--Sand should be clean and well graded (Specifications for Aggregate for Masonry Mortar, ASTM C-144). There should be all sizes of particles ranging from very fine to coarse for best workability. Too much sand of any one size should be avoided. Sands deficient in fines generally produce harsh mortars, while an excess of fines will increase the mixing water demand (and possibly the cementitious material requirement) which will increase shrinkage.

MIXING--Thorough mixing is important to the development of the potential desirable properties of any mortar—and thorough mixing requires time. Mortar should be mixed at least five minutes after all materials are in the mechanical mixer. Less mixing time may result in non-uniformity, poor workability, low water retention and less than optimum air content.

RETEMPERING--Mortar that has been mixed but not used immediately, tends to dry out and stiffen. Loss of water and evaporation on a hot, dry day can be reduced by wetting the mortar board and covering the mortar in the mortar boxes or wheelbarrows.

If necessary to restore workability, mortar may be retempered by thorough remixing and by adding water. Although the addition of water may slightly reduce the strength, the effect on the wall is preferable to that which would result from the use of dry stiff mortar.

If mortar stiffens because of hydration (setting), it should be discarded. Since it is difficult to tell by sight or feel whether mortar stiffening is due to evaporation or hydration, the most practical method of determining the suitability of mortar is on the basis of time elapsed after mixing. When the air temperature is 80 deg. F. or higher, the mortar should be used within 2-1/2 hours of the time it was mixed. When the air temperature is below 80 deg. F., the mortar should be used within 3-1/2 hours. Mortar that has not been used within these limits should be discarded.

PREPARATION OF MORTAR IN COLD WEATHER--The temperature of the mortar when placed in the wall should be between 70 deg. F. and 100 deg. F. Higher temperatures may result in fast hardening, making it impossible for the mason to give good workmanship.

Heating the mixing water is one of the easiest methods of raising the temperature of the mortar. Mixing water should not be heated above 160 deg. F., because of the danger of "flash" set when it comes in contact with the cement.

In freezing weather, moisture in the sand will turn to ice, which must be thawed out by one of a number of methods before the sand can be used.

The use of an admixture to lower the freezing point of mortar during winter construction should not be permitted. The quantity of such materials necessary to lower the freezing point of mortar to any appreciable degree would be so large that mortar strength and other desirable properties would be seriously impaired.

To shorten the time required for a mortar to attain sufficient strength to resist freezing action, a calcium chloride admixture is often used. Calcium chloride should be used in a solution. Such a solution can be prepared by dissolving 100 lb. of flake calcium chloride in 25 gal. of water. The resulting solution contains 1 lb. of calcium chloride in each quart. Not more than 1 qt. of this solution should be used with each sack of masonry cement.

Additional information sheets such as "Suggested Specifications for Masonry Cement Mortar" and "Concrete Masonry Construction in Cold Weather" are available free in the United States and Canada on request to the Portland Cement Association.
1961-1962 List of Accredited Schools of Architecture
and of the Degree Conferred on Completion of Their Professional Curricula in Architecture

Issued by the
NATIONAL ARCHITECTURAL ACCREDITING BOARD

ARIZONA STATE UNIVERSITY (Provisional)
Tempe, Arizona — B. Arch.

ARKANSAS, UNIVERSITY OF
Fayetteville, Ark — B. Arch.

AUBURN UNIVERSITY OF
Auburn, Ala. — B. Arch.

CALIFORNIA, UNIVERSITY OF
Berkeley, Calif. — B. Arch.

CARNegie INSTITUTE OF TECHNOLOGY
Pittsburgh, Pa. — B. Arch.

CATHOLIC UNIVERSITY
Washington, D.C. — B. Arch.

CINCINNATI, UNIVERSITY OF
Cincinnati, Ohio — B. S. in Arch.

CLEMSON A. & M. College
Clemson, S. Carolina — B. Arch.

COLUMBIA UNIVERSITY
New York, N.Y. — B. Arch.

CORNELL UNIVERSITY
Ithaca, N.Y. — B. Arch.

FLORIDA, UNIVERSITY OF
Gainesville, Florida — B. Arch.

GEORGIA INSTITUTE OF TECHNOLOGY
Atlanta, Ga. — B. Arch.

HARVARD UNIVERSITY
Cambridge, Mass. — B. Arch.

HOUSTON, UNIVERSITY OF
Houston, Texas — B. Arch.

HOWARD UNIVERSITY
Washington, D.C. — B. Arch.

ILLINOIS INSTITUTE OF TECHNOLOGY
Chicago, Ill. — B. Arch.

ILLINOIS, UNIVERSITY OF
Urbana, Ill. — B. Arch.

IOWA STATE UNIVERSITY
Ames, Iowa — B. Arch.

KANSAS STATE UNIVERSITY
Manhattan, Kansas — B. Arch.

KANSAS, UNIVERSITY OF
Lawrence, Kansas — B. Arch.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Cambridge, Mass. — B. Arch.

MIAMI UNIVERSITY
Oxford, Ohio — B. Arch.

MICHIGAN, UNIVERSITY OF
Ann Arbor, Mich. — B. Arch.

MINNESOTA, UNIVERSITY OF
Minneapolis, Minn. — B. Arch.

MONTANA STATE COLLEGE
Bozeman, Mont. — B. Arch.

NEBRASKA, UNIVERSITY OF
Lincoln, Neb. — B. Arch.

NORTH CAROLINA STATE COLLEGE
Raleigh, N. C. — B. Arch.

NOTRE DAME, UNIVERSITY OF
Notre Dame, Ind. — B. Arch.

OHIO STATE UNIVERSITY
Columbus, Ohio — B. Arch.

OKLAHOMA STATE UNIVERSITY
Stillwater, Okla. — B. Arch.

OKLAHOMA, UNIVERSITY OF
Norman, Okla. — B. Arch.

OREGON, UNIVERSITY OF
Eugene, Oregon — B. Arch.

PENNSYLVANIA STATE UNIVERSITY
University Park, Pa. — B. Arch.

PENNSYLVANIA, UNIVERSITY OF

PRATT INSTITUTE
Brooklyn, N. Y. — B. Arch.

PRINCETON UNIVERSITY
Princeton, N. J. — M.F.A. in Arch.

RENSSELAER POLYTECHNIC INSTITUTE
Troy, N. Y. — B. Arch.

RHODE ISLAND SCHOOL OF DESIGN
Providence, R. I. — B. S. in Arch.

SOUTHERN CALIFORNIA, UNIVERSITY OF
Los Angeles, Cal. — B. Arch.

SYRACUSE UNIVERSITY
Syracuse, N. Y. — B. Arch.

TENNESSE, UNIVERSITY OF
Knoxville, Ten. — B. Arch.

TEXAS A. & M. COLLEGE
College Station, Texas — B. Arch.

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas — B. Arch.

TEXAS, UNIVERSITY OF
Austin, Texas — B. Arch.

TULANE, UNIVERSITY OF
New Orleans, La. — B. Arch.

UTOH, UNIVERSITY OF
Salt Lake City, Utah — B. Arch.

VIRGINIA POLYTECHNIC INSTITUTE
Blacksburg, Va. — B. Arch.

VIRGINIA, UNIVERSITY OF
Charlottesville, Va. — B. Arch.

WASHINGTON UNIVERSITY
St. Louis, Mo. — B. Arch.

WASHINGTON, UNIVERSITY OF
Seattle, Wash. — B. Arch.

WESTERN RESERVE UNIVERSITY (Provisional)
Cleveland, Ohio — B. Arch.

YALE UNIVERSITY
New Haven, Conn. — B. Arch.

Total 51

The Accredited List is revised annually and is valid only until the next list is issued.

Normally, schools are visited at five year intervals. Accreditation is given for five years, subject to Board approval of an Annual Interim Report submitted by each school.

The Term "Provisional" indicates that the school accreditation is for less than the normal five year period.
Cover Photo Honored

An architectural photograph featured in full color on the April Indiana Architect cover received a merit award at the recent Professional Photographers of America Exhibition in New York.

The color photograph of the First Missionary Church, Berne, was created by M. Wesley Pusey, president of Technika, Inc., a Fort Wayne photographic firm specializing in architectural photography.

Designed by Fort Wayne architect Orus Eash, AIA, a story was also devoted to the structure in the April issue.

Another Technika architectural photograph receiving an award was one of the Fort Wayne Jewish Temple, designed by A. M. Strauss and Associates, Fort Wayne.

Building Products Register

The 1962 Edition of the AIA Building Products Register will be published January 1, by The American Institute of Architects with a 30-day trial subscription offer for all design professionals, contractors, investors, and others interested in the unique single-source reference for direct comparison of building products.

Theodore W. Dominick, Director of the AIA Division of Professional Services, disclosed that the 1962 Edition of the Register will have approximately 40 per cent more content and usefulness than the premier edition published in 1960. The price of the Register is $25.

The AIA Building Products Register, developed by the Institute after 10 years’ study of how to fill the need for professional pre-selection of building products, will contain these new features, Mr. Dominick said:

- Products categories have been upped to 24.
- A trade names index has been added for ease of reference.
- Page layout has been regrouped to allow more horizontal headings.
- Use of abbreviations have been minimized to avoid confusion.

The Register is the only single source of information on which a comparative analysis of building product criteria and their performance can be made. According to users of the premier edition, the data and their method of presentation substantially increased staff productivity and reduced...
the time spent in gathering factual material to make product analysis.

In addition to the listings of manufacturers' products and comparison of their performance, the 1962 Register will contain more than 1,100 professional abstracts of ASA, ASTM, Federal Specifications, Department of Commerce, Underwriters' Laboratories, and other standards.

Copies of the Register may be purchased directly or ordered for 30-day trial subscription by writing to the Building Products Registry Service, The American Institute of Architects, 1735 New York Avenue, N.W., Washington 6, D.C.

Horizon Home Award

Gelfius Construction Company owner, Charles Gelfius, of Columbus, was the recipient of the first midwest regional merchandising award presented by A. M. Davis, Regional Manager of Portland Cement Association for the concrete industries National Horizon Homes contest. The midwest region includes Illinois, Wisconsin, Michigan, Ohio, West Virginia, Kentucky and Indiana.

The Columbus Horizon Home was designed by Charles A. Totten, AIA, Columbus architect, and built by Mr. Gelfius at 3340 Grove Parkway in the exclusive Forest Park North addition. The award was $500.00 and a plaque from the program sponsors which include the National Concrete Masonry Association, the National Ready Mixed Concrete Association, and Portland Cement Association.

In presenting the award, Mr. Davis said, "The sponsors of this national contest are proud to present this promotional award to Mr. Gelfius, for his outstanding merchandising, promotional effort and ability. We can readily see why Mr. Gelfius is one of the outstanding builders in the midwest."

The local sponsors of the Columbus Horizon Home contest were E. and T. Burnside Company and N. C. Devening and Son. Promotional assistance was supplied by Taylor Lumber and Supply Company and the Portland Cement Association.

In receiving the award, Mr. Gelfius said, "Without the full cooperation of Devening and Burnside and the team work of Charles Totten, the winning of this award would not have been possible."

The Gelfius Horizon Home along with two other Indiana Horizon Homes was featured on the cover and in an article in the September INDIANA ARCHITECT.

Columbus architect Charles Totten provided many interesting and functional construction features. The tri-level home was veneered with white concrete brick. It contains a two-story family room with balconies from the two levels and a concrete brick fireplace and wall. Both formal and informal patios, a shuffleboard court and a large driveway were cast of concrete. The home also has a concrete block fall-out shelter.

with the help of

Murray Showrooms...

"you could finish the job"

We maintain handsome wholesale furniture displays for your exclusive use. Upon introduction by you, your clients will find an unlimited selection of the finest furnishings the world has to offer—whether for home, office or commercial installation. As this is a completely confidential service in which you are accorded the full trade discount, the advantages are many in finishing the job yourself.

FACTORY REPRESENTATIVES FOR

Baker Furniture, Inc.  Widdcomb-Mueller Corp.
John Widdicomb Co.  Loeblein Bros. Inc.
Wm. A. Berkey Furniture Co.  Meyer-Gunther-Martin
Johnson Furniture Co.  Scroll, Inc.
Mount Airy Furniture Co.  Ralph Morse Furniture Co.
Michigan Seating Co.

Murray Showrooms, Inc.

31 WEST 13TH STREET  9701 READING ROAD
INDIANAPOLIS 2, IND.  CINCINNATI 15, OHIO
MELROSE 4-1417  POPLAR 1-6707

WHOLESALEST OF FINE FURNITURE
Good Lumber  Imported & Domestic Hardwoods
Fine Custom Millwork  Pre-assembled Components

BURNET-BINFORD LUMBER CO.
1401 West 30th St.  Indianapolis 23, Ind.
8502 Westfield Blvd.  Nora, Ind.

- Blue Prints - White Prints - Photo Copies
  Pick-Up and Delivery Service

Exclusive
K&E DEALER
Slide Rules • Measuring Tapes
Surveying Instruments, for Sale or Rent
Level Rods and Poles • Complete Stocks
LeRoy Lettering Instruments & Supplies

FOR BETTER SERVICE . . .
2—CONVENIENT LOCATIONS—2

MARBAUGH Engineering Supply Co.
140 E. Wabash St., Indianapolis
5226 N. Keystone Ave., Indianapolis
MElrose 7-3468
CLifford 1-7070

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.

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

SPEAKING OF ECONOMY!
TRY-STEEL STUD HOLLOW PARTITIONS OF
GENUINE
LATH and plaster

STEEL STUD HOLLOW PARTITIONS
ELIMINATE COSTLY WEIGHT • CONCEAL PIPING, GIVE
BUILDINGS A CLEAN APPEARANCE WHILE SAVING VALUABLE SPACE
INVESTIGATE — SPECIFY — DEMAND
ECONOMICAL STEEL STUDS ON YOUR NEXT PRODUCT

Lathing & Plastering Bureau of Indianapolis, Inc.
SECRETARY-TREASURER: WILLIAM F. BOYCE, P.O. BOX 572, INDIANAPOLIS 6, INDIANA
Early this fall, a liaison committee composed of assigned members of the Indiana Society of Architects and the Indianapolis Chapter of the Producers' Council joined to establish a new concept for informational programs the Producers' Council will present to the Architects during the coming schedule of meetings.

For a number of years the architects of Indiana have had a high regard for the close cooperation the Council members, to a man, continually offer the I.S.A. This relationship emphasizes a well designed medium to keep architects abreast of new products produced by the 37 nationally prominent manufacturers of building materials who are represented by the Producers' Council.

Equally important perhaps is the spirit of fellowship that prevails among the membership of the two organizations. This informality is concurrently highlighted by joint participation during the I.S.A. state convention, pointing to a golf tournament and a fun-fest dinner. In the fall, specifically as a tribute to the Thanksgiving season, the P.C. hosts a grandiose gathering of all architects with their membership. This year, Hal E. Peters and Robert J. Clay, President and Vice-President respectively, of the local Council surprised the gathering with a precedent setting event by awarding ten "Archi-Awards" (with appropriate verbage) to architects well deserved in fun.

The liaison committee members of the P.C.—composed of Bob Dietrick, Chairman, Eric Moore and Hank Stearns and assisted by Don Clark, Bob Smith and Fran Schroeder of the I.S.A. determined future informational meetings would be scheduled in the evening at a downtown location and would be designed as a high level, well planned industry approach to new products, application and current research goals. It is anticipated this concept of programs and the format of scheduled presentations will be well accepted by the architects and by their participation will justify the efforts put forth in this endeavor.

On October 30, the first of the newly reorganized programs was sponsored by the U.S. Steel Corporation at the Indianapolis Athletic Club. (A full report of this program was published in the October issue of the INDIANA ARCHITECT). The 92 who attended this meeting forecasts the appeal future programs expect to attain.

The complete schedule of meetings is as follows:

**January 8, 1962** — New Product Presentation by all members of Producers' Council. This will be a display of the very latest products in and out of research.

**February 3, 1962** — Indianapolis Home Show luncheon for Architects and their wives.

**March 5, 1962** — Dinner Meeting — Portland Cement Association and the Hydraulic Pressed Brick Co. This will be an Industry approach to Concrete Masonry Product Construction.

**April 9, 1962** — Dinner Meeting — tentative sponsors who have requested participation are:
- Formica Corporation
- Arcadia Metal Products
- U. S. Plywood Corporation

**May 24, 1962** — Golf outing and Dinner — Hillcrest Country Club.


As an added feature of the January 8th meeting, a panel of Indianapolis District architects will judge entries of technical product literature from P.C. members. This points to another phase of the desire on the part of Council affiliation to promote the highest standard of information for the architectural profession.

The liaison committee offers this schedule of events with confidence the Producers' Council has proposed a distinctly beneficial array of programs designed for the architectural profession.
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!

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

PART I

My gratitude to the President and friends of the AIA for the invitation to participate in this panel is so much greater because I have a few positive things to say and many questions to raise.

Such questions, I fear, will have to deal with the fundamentals of a contemporary culture of cities. I have been trying to stay away from them and to concentrate instead on specific problems. I had prepared a series of slides documenting what we are doing in Italy and in Europe, but then I realized that in the evaluation of each specific case, it is the Roehampton development in London or Vallingby near Stockholm or the most recent Italian settlements, the same old questions emerge. They concern the dimension of the modern city, the architects' role in the process which goes from city-planning to city-making, and the philosophy of urban renewal. Unless we reach some common views on these issues, it will be difficult even to understand one another.

Consider, for example, Brasilia. We have heard the most unconditional praise of this capital city, and also the most violent criticism. This happened because we started from different perspectives on what a city is or should be today. Again, take the case of the satellite communities on the periphery of the metropolis: Is this the right way to cope with city expansion and, if not, do we have a better way? As for urban renewal, it is needed in Los Angeles and Detroit just as much as in Rome and Venice, but its meaning is totally different here and there. Sure, it is easy to agree on official platitudes such as: "In cities of historical value, the respect for the past should be balanced by the needs of contemporary society." But when we come down to how to reach such equilibrium, the divergence of opinions is very strong in Venice and in Rome, and perhaps also in Philadelphia.

This is why I consider this panel and the discussions of this convention extremely pertinent also for the future of European cities. The American contribution is needed in Europe and in the world now more than ever before. During the present period of western prosperity, it is no longer a matter of money or material help, but of ideas and methods. Perhaps another Peace Corps is needed, made up of architects and city designers.

Well, where can we start from to understand what a modern city is? Oddly enough, I started way back in 1492, just the year of the discovery of America. This is what happened: A few years ago, I was reading the famous historian, Jacob Burckhardt, and all of a sudden I was struck by a sentence. After visiting Ferrara, a town between Bologna and Venice, in 1860, Burckhardt wrote: "Ferrara is the first modern city in Europe." He did not give any explanation for this amazing interpretation. I looked into town-planning literature, but found very little about Ferrara. Many authors were repeating Burckhardt's sentence, but none would explain the reasons for it. Finally, I decided to devote a few years to the study of this town. Last year, on the centennial of Burckhardt's statement, I published a book about it. In a very few words, these were my three conclusions:

1. Ferrara could be defined as "the first modern city in Europe" because there was a man who in 1492 designed a master plan for its expansion. He made the city three times as large as it was during the Middle Ages and the early Renaissance. It was, in a way, an open plan, because the territory, urbanized in 1492, has never been completely developed even today. This approach was certainly new, and in basic contrast, both with the pragmatic attitude of the Middle Ages, when planning and building were almost synchronous activities, and with the Renaissance habit of inventing abstract, ideal, and static cities.

2. Such an extensive plan could not be implemented throughout by a predetermined third dimension. The planner of Ferrara could not build the whole town; he had to have some confidence in its natural growth, and leave something for future architects to do. But he was an architect himself, and knew that a plan is meaningful only when it gets a third dimension, that is, only if architects make it true. And here was his genius. He was able to identify the few key structures of the new town that would guarantee for four centuries and a half the urban pattern. Mind you: These focal points were not monumental plazas or princely roads, but sometimes very small buildings at the corners of secondary streets which, even when isolated, would suggest the image of the city. A flexible image, so that it worked, yet a precise one, so that it could not be betrayed.

3. Lastly, this man, Biagio Rossetti, spent about ten years developing the new section of Ferrara, but then he spent about twenty years in renewing the old city. At the end of his life, in 1516, he had integrated the old city with its addition, thus creating a new modern organism.

There it is again. Ferrara was a modern city because it grew coherently in relation to the same basic problems of any organic culture of cities: The measure of the city, the passage from its plan to its architecture, the approach to
urban renewal. The answers are naturally different, but the main questions remain, perhaps, the same in 1492, as in 1961.

Let’s then tackle the first of these three questions: The measure or dimension of the city. I may be wrong, but I have the impression that our urban culture went to pieces because architects were unable to see that a city would have a form even without having a dimension. They are not to blame; the notion of form had somehow been dependent on the notion of measure throughout history; and therefore, town planners tried to impose on the modern city a dimension which, however big, was always too small and deceiving. All of the nineteenth century culture, which continued deep into the first half of our century, suffers from this psychosis about the size of the city. It is indeed surprising: Just at the time when modern technology was destroying the mechanical justification and the social function of an urban measure, its determination became the ideal and purpose of town planners.

You will remember that “The Art of Building Cities” by Camillo Sitte was published in 1889. The garden city idea, by Ebenezer Howard, became the official doctrine of town-planning a few years later. Thus, the utopia of an industrial autonomous community found its historical mirror in the idealistic interpretation of the agricultural autonomous community of the Middle Ages.

A similar approach was applied to the metropolis. Looking at the successive town plans designed for London, Paris and Rome, in the last one hundred years, one has the impression that the chief concern of the planners was to impose a dimension on the city. The old walls were destroyed; they tried to build new ones—never mind if they consisted of greenbelts instead of brick and stone.

The theoretical ideal became the self-sufficient settlement in a self-contained city form. Now this kind of vision may continue to work for small towns, but it looks anachronistic not only for the super-metropolis, but also for the metropolis between one and two million inhabitants. We see in Europe that people resent the artificiality of this kind of overgrown villages added to cities, because they cannot offer the benefits of the old town, and deprive them of the advantages of the metropolis. Moreover, a city with its high buildings at the center, lowering down to the periphery until it merges with the country, is a sort of pyramidal structure of an oligarchic society. It cannot embody a democratic society with our contemporary technological instruments.

I think that we should recognize, sad as it may seem, that our modern city has no more a dimension, or at least we do not know how to measure it.

Once we have recognized this fundamental character of the modern city, we can interpret it in two opposite ways. We can repeat that the city is doomed and disappearing, because the suburban sprawl nullifies the difference between town and country and amalgamates the whole territory. There is, however, another hypothesis: The city is still there, strong and alive, maintaining its social and cultural functions, but it is looking for a new urban form which has nothing to do with the old one, because the new urban form is dynamic, sizeless and continuous.

(To Be Concluded)
Gay parasols of concrete
add a festive touch to eating out

Conical bowls atop slender concrete stems create a roof that's unusual and dramatic. For a pavilion where informal meals are meant to be fun, these parasols give just the right atmosphere.

Only in concrete do such architectural flights of fancy become so down-to-earth practical. With its unique plasticity, concrete provides endless creative potential.

Architects today are finding more and more new uses for concrete—as a basic structural material of exciting natural beauty as well as great strength. It's stimulating a whole new trend in contemporary American structures.

PORTLAND CEMENT ASSOCIATION 612 Merchant's Bank Bldg., Indianapolis 4, Indiana
A national organization to improve and extend the uses of concrete
HAPPY HOLIDAYS
from

[Cartoon of Santa and a construction worker]