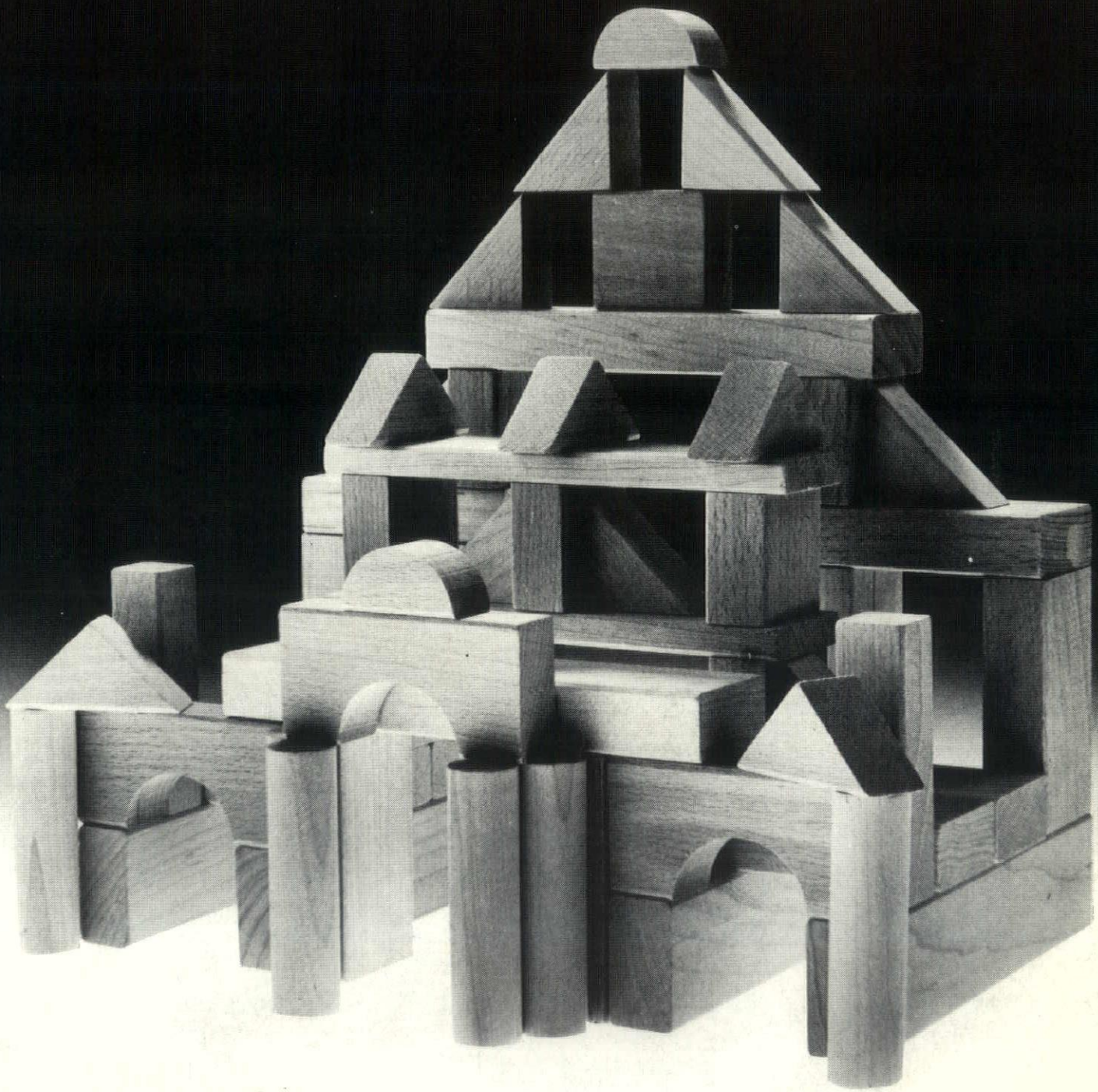
IA - 1977 - FALL

IOWA ARCHITECT

Fall 1977



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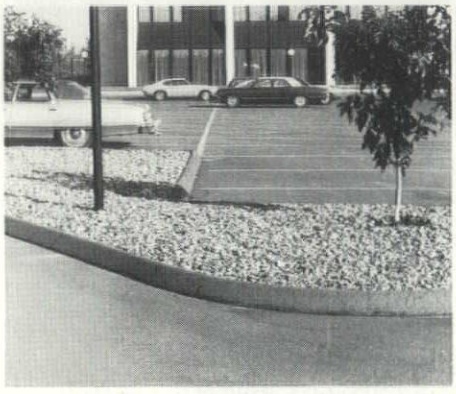

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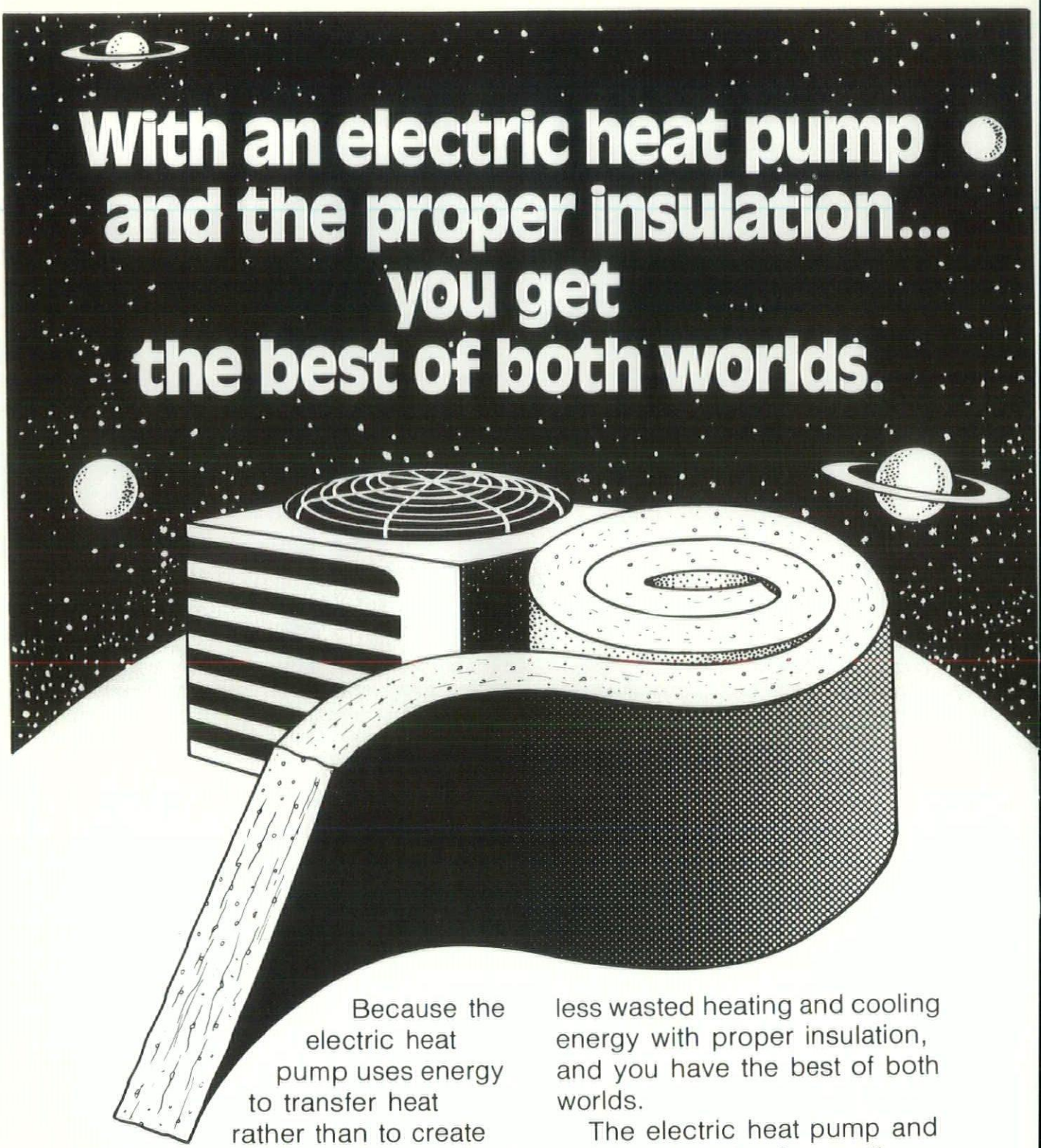

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IOWA POWER

ia

IOWA ARCHITECT

Volume 24 Number 2
Summer 1977

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Tomorrow Revisited

by Bryan Shiffler A.I.A.
Editor

Tomorrow was the theme of the 1977 convention of the American Institute of Architects. An eye-opening display of multi-media presentations, open planning concepts, and extravagant salesmanship. Those who attended agreed that the convention was a dramatic departure from previous efforts, but no one could agree if it was successful or not.

The incredible surroundings, produced by Niccolson Designs, became the nucleus of the convention. Their impact was diluted, however, by the hipocracy of the convention's spirit. Architects from across the country gathered in San Diego, a fragile paradise walking on water pumped from Arizona, to be told that planet number three is running out of gas. Some of the best minds in the country were brought in to brief us on our plight. Raymond Kappe talked about how architects must change to cope with our deteriorating environment. Dan Greenburg illustrated how computers can broaden the architects' field of involvement. Rusty Schweickart, the Apollo 9 astronaut, showed slides of future space architecture to the strains of "2001: A Space Odessey" playing in the background. The convention then was concluded by F. M. Esfandiary, who for a change of pace, summarized and refuted all of the above by categorizing the previous speakers as being prophets of doom and glorifying Man's eternal quest for new and better solutions.

The speakers were all quite interesting and their material was timely. However, no matter how relevant or mind expanding their speeches were, they were undermined by the frivolities of conventioneering gone berserk. Imagine Raymond Kappe warning of the energy shortages in front of twenty-four slide projectors, two movie projectors, and a ten foot image of his face blown up by a video projector with images supplied by two color TV cameras. The sound system consisted of speakers so large, they could only have been found in California.

We were told to conserve by a convention that could only be called energy extravaganza. After flying in on jet planes, we learned about reducing fuel consumption. We saw how our natural resources are being depleted as we took pictures of irrigated gardens. The Institute called us to San Diego to prepare us for tomorrow and wound up showing us what brought us to today. As in life, and especially at the convention, we were encapsulated by over-sized, over-electric and under-designed conveniences.

If Esfandiary is right, and that someday through Man's scientific and creative tenacity we will find ourselves in an energy glut, then my feelings will fall meaningless as a token of the energy paranoia of the seventies. However, if no such energy salvation is near, then perhaps the idea of national conventions should be rethought. We now possess the ability to communicate instantly to any point in the world. Why then, with such power, do we annually pack our cameras and wander across the county for bits of information that could be more effectively handled in other ways.

Curiously enough, this convention almost broke through the convention convention. The tradition, which dictates format over sensibility, was created by travel agents during the off season doldrums. Since the speakers were televised, and their voices artificially magnified by electronics, couldn't the entire convention be bottled and sent across space to the television sets of architects all over the United States? Chapters could group together to watch speeches beamed to their city or state. Voting and debate could occur instantly over telephone lines. Speeches instead of being lost could be saved and replayed for architectural schools, broadcast over public television networks, or even transmitted to architects throughout the world.

The impact of the convention, instead of being hoarded by those who can afford the trip and the registration fee, could be experienced by virtually every member of the institute. It seems a shame that conventions continue to exist because members are lured to distant cities by four color travel brochures and thoughts of tax deductions. If conventions are intended as a means to distribute information, then let's do it.

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Drafting Practices of Architects- Hansen Lind Meyer

by Jerry Quebe A.I.A
Photos by Charles Hopkins

Shortly after graduation from college I was performing construction administration services on one of our projects when a contractor said to me, "Why don't architects and engineers produce a set of contract documents which visually and functionally are equal in quality to what they expect the contractor to produce in the building?" That particular question lingered with me for a very long time. Although it never produced any immediacy within me to revolutionize what we were doing in our office; it certainly served as a background and a lingering comment to continually press for improvement wherever it appeared that improvement was needed or could be made. Seven years ago I was given the responsibility for production and scheduling at Hansen Lind Meyer, was charged with the establishment of techniques which would result in a superior set of contract documents at a lower cost of production.

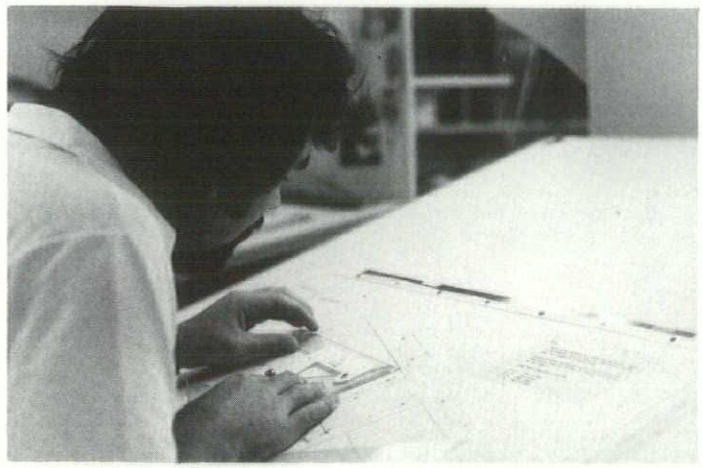
Our firm has always had the philosophy that a neat and well organized set of contract documents would result in less confusion during the bidding process and require less interpretation during construction. This would mean tighter and lower bids and fewer chances for contractor/architect conflicts during the construction process.

With the advent of the formal charge to improve the documents and lower the cost, we evaluated a series of questions.

1. How long has it been since we analyzed our techniques in light of changing trends in the construction industry, changing trends in our architectural practice, advances in automated equipment available and improved techniques available in the reproductive processes?
2. Are our documents well organized for today's advanced and refined building techniques?
3. Are our documents clear, concise, and consistent from project to project?
4. Are we wasting motions in our drafting process which consequently costs us and our clients?

In attempting to analyze the above questions, a fifth question was posed.

5. Do we have the proper data available to provide us with a historic analysis of our past work, so that we can project into the future what impact changing will have, and can we properly analyze these new techniques after they are set in motion to determine the magnitude of improvements if any?



You might say that in asking ourselves the above questions, we were employing the same approach which we use in systematically approaching designs for our clients. We were being analytical. This began with the definition of the contract documents, right through to a careful analysis of what was wrong with our former methods and procedures. Because of the analytical approach which we have in the development of our drafting system, we feel that the title for this article should more properly be called "Common Sense Development of Drafting Systems" because for all practical purposes common sense has been the basis of our development process over the last several years.

This article will cover a general cross-section of what we are doing and how it works for us. It will not attempt to tell you what to do, not having specific information about your practice or your personnel. Very few systems can be taken from one office and directly implemented in another office without careful consideration of the impact. This normally will produce minor variations so that the systems function well with the techniques and philosophies already in use within that office. This article will attempt to give you enough information about our systems so that you can begin to evaluate the systems for yourself and determine where application might lie for use in your office.

After analysis of our present methods and subsequent research into new techniques available, we implemented many new changes in our drafting and re-

production system. The major changes being presented here are: Divisional Format, Overlay Drafting System, Photographic Techniques, Modular Drafting, Standard Details, Standards and Abbreviations, and Computer Techniques.

Our analysis, which we used to develop our drafting systems, included a definition of the contract documents as follows:

> The contract documents are the published set of information produced by the architect/engineer which transforms an owner's building program into a graphic set of documents used by the contractor to bid or negotiate a price for this program, and subsequently to build it. This set of contract documents consists of the project manual (specifications) and the contract drawings.

In our office we have defined the requirements of the project manual, which is an 8½" by 11" bound booklet, to be the portion of the documents which contains the legal contract requirements and the technical requirements of the building materials defining the quality which they must achieve. The contract drawings, on the other hand, define the quantity of materials, their location and configuration.

Having defined the contract documents, and more specifically, the requirements of the contract drawings, we determined after an analysis of our past techniques, that with the advent of fast track construction techniques, it was not difficult to ascertain that our drawings were not organized to follow the construction processes. Although some persons may argue that this is not especially critical, it seemed like a logical thing to attempt and proved to be quite easy to accomplish. In order to accomplish this, we developed a divisional format for our contract drawings. The basic format for the normal content of documents submitted to the construction industry for bidding purposes is contained within 12 sections.

Section 1 General, contains general information which will pertain to all other sections. This includes on a typical project a cover sheet, a sheet which identifies drafting symbols and abbreviations, and schedules which pertain to all sections of the drawings, such as equipment.

Section 2 Site Development. During construction, phases of the site work usually are the first items to appear on the construction agenda. We therefore felt that site work drawings should be bound within the set as one of the first sections. The Site Development Section, as we have defined it in our office, will contain all information pertinent to the site work. This could include existing, as well as new site plans, electrical and mechanical site work, landscaping, roads, walks, etc. It would also include all details and schedules pertinent to the site work.

Section 3 Structural. This is not any radical departure of organization. It appears in our documents following site development and prior to the architectural drawings in that the structural work is the next logical step beyond site development. This section, with all other sections, contains the complete information relative to the performance of structural work which includes plans, schedules, and details.

Section 4 Building Enclosure. Here a more radical departure has occurred from standard drawing organization. Since the building enclosure is the next thing to occur logically in the sequence of construction, it is included here as the next sequence of our drawings. This section contains all information which relates to the enclosure of the building. It includes exterior wall plans, exterior sections and details, roof plans and details, and exterior elevations. In the event of schedules such as window schedules, these would occur in this section. It basically contains all information relative to the enclosure of the building.

Section 5, Building Division, contains all information necessary to the interior partitioning of the building. This includes interior floor plans, interior details relating to the walls, room finish schedules, door schedules, and hardware schedules.

Section 6, Ceilings, contains all information relative to ceiling construction. This includes reflected ceiling plans and the ceiling details.

Section 7, Fixtures and Furnishings, includes all casework plans, all millwork plans, miscellaneous equipment plans, as well as any related schedules and details.

Section 8, Plumbing, contains all information relative to plumbing for the buiding. This includes plumbing plans, details and schedules.

Section 9, Piping, contains all information relative to piping for the building. This includes the plans, details, and schedules.

Section 10, HVAC, contains all information relative to the heating, ventilating, and air conditioning for the building. Once again, all plans, details and schedules are included.

Section 11, Electrical, contains all information relative to the electrical power for the building, including the plans, riser diagrams, details, and schedules.

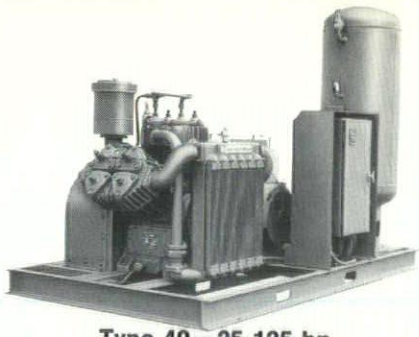
Section 12, Communications, contains all information relative to the communications within the building, including systems plans, riser diagrams, communication matrices, details, and schedules.

Other sections have been set aside for additional information which may be required for completion of the building. Section 13 is the color schedule. Section 14 signage, and Section 15 could relate to movable equipment. Additional sections can be added to tailor the requirements of a specific building.

The sheet numbering which we employ also follows the divisional format and contains flexibility within it. For example, drawings which are bound within Section 4, Building Enclosure, all begin with the number 4. Sheets are numbered consecutively

(continued on page 9)

Type 30—½ to 50 hp
Air Cooled



Type 40—25-125 hp
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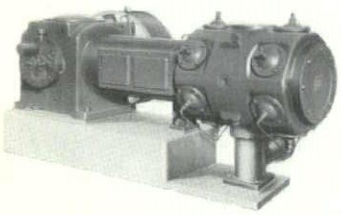
AIR CUBE—75-150 hp
Water Cooled



ESH—20-125 hp
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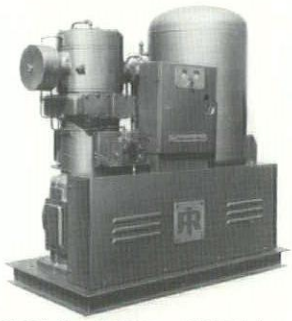
ESV—15-125 hp
Water Cooled



ESV Package—15-75 hp
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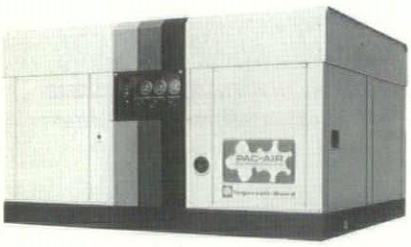
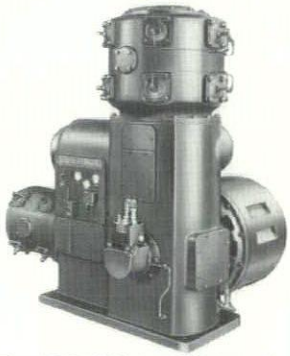


PAC-AIR—50-200 hp
Air or Water Cooled



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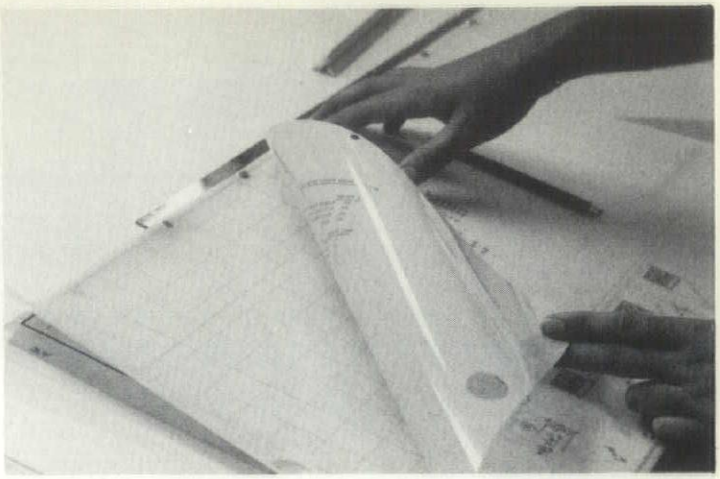
Drafting (continued from page 7)

through this section, 4.1, 4.2, etc. Basically those drawings which are difficult to estimate in quanity at the begining of the project are contained at the end of each section; these being the details and scheduled sheets. This enables us to number our drawings immediately upon their commencement. In the event that we find that we need 14 or 15 sheets in the section instead of the 12 or 13 we planned, we merely add sheets to the end of the section. This means that we can add sheets in the Building Enclosure Section without affecting the sheet numbers in the Building Division Section. This results in the ability to number the sheets early, remain flexible as far as adding sheets, and still be able to key details when they are started. This eliminates waiting until the end of the project when all of the sheet numbers are normally established, or a situation of adding sheets in the middle of a set which are out of numbering sequence, such as drawing 20 followed by 20A and then drawing 21.

The Overlay Drafting System in our office is the backbone of all our drafting practices. It is the basic drafting system employed to which all of the other techniques are hinged. The Overlay Drafting System consists of a process whereby information common to various drawings is drawn only once. By means of an overlay to this base drawing, additional information is added to customize this base drawing in a manner to provide more than one drawing. An example of this would be the architectural floor plan. There is certain information on this floor plan which is common to the reflected ceiling plan, fixtures and furnishings plan, plumbing plan, piping plan, HVAC plan, electrical plan, and the communications plan. This common information is put on what we term a base sheet. In order to develop an architectural floor plan, an overlay is made to this base sheet. On this overlay information is added which, when combined with the base sheet, customizes it to become the architectural floor plan. This overlay for example, might include such things as dimensions, architectural notations, and detail keys. This overlay can be removed and another overlay can be added which might contain the reflected ceiling plan along with its detail key. Or, it may be removed and an overlay added containing information relative to the mechanical or electrical systems of the building. In its simplest definition then, it could be defined as a system of base sheets and overlays which allows for the drawing of certain basic information only once. This information is then customized by means of an overlay providing a composite plan which forms one of the many drawings in a set of documents defining the elements related to a specific floor plan.

Having established the overlay drafting process, one of its side benefits is the ability to reproduce the contract drawings by means of the offset process utilizing various colors to represent various elements. For example, the architectural base plan may



be reproduced in a dark solid color on the architectural floor plan. The overlay information, which customizes it, could be reproduced in another color. This eliminates a large number of lines in the same color, producing additional clarity to the drawings. This same base plan could then be reproduced in either a solid or a screened mode in a light color. The customized information of either the mechanical or electrical sections might be added in a darker color, once again increasing the clarity of the drawing. Once established that colored offset reproduction may be utilized on a project, the overlay drafting process can be carried to elements of the drawing other than just the plans. For example, a cross-section through a juncture of a new building against an existing building may have the existing building drawn on the base sheet and the new construction drawn on an overlay. This gives you the opportunity to reproduce the existing building in one color and the new construction in another color.

Our firm, prior to the implementation of this system, required each of the project managers to carefully analyze the content of the documents prior to commencement of them. I feel that one of the advantages of the Overlay Drafting System is that it forces you to do this. This resulted in a very easy transition from conventional drafting techniques to the Overlay Drafting System because we were already accustomed to this organizational process. Some firms, however, find this to be a bit of a struggle. In order to commence a project utilizing the Overlay Drafting System, one must first sit down and perform this analysis. In short, what you must do is establish the system of base sheets and overlays. In other words, determine what information is common to certain drawings and develop that system of base sheets, determining what information is necessary to customize these to the various sections of the drawing, and develop the system of overlays.

This pre-planning results in administrative economy of contract drawings. This list of drawings is completed to the extent that each drawing is listed by title, its sheet number is assigned, and its base sheets and overlays are determined so that the per-

(continued on page 11)

Drafting (continued from page 9)
sonnel working on the project know exactly how to compose the set of documents. This is usually accomplished at the conclusion of schematic design prior to the start of design development.

Following the above procedure, it is then customary in our office for the architectural personnel to begin the drafting process. This is done by first developing the information which is common to structural and architectural drawings. Once this information is developed, a photographic reproduction is made. This reproduction is then given to the structural personnel for further development. Following this reproduction, additional information is added to this drawing relative to the building enclosure. Once this information is complete, another photographic reproduction is made which is then used as the base sheet for the building enclosure section. Following this reproduction, additional information is added which then produces the base sheet which is used for the building division, reflected ceilings, fixtures and furnishings, plumbing, piping, HVAC, electrical power and communication drawings. Once this base sheet is complete, the architectural personnel then complete the reflected ceiling and fixtures and furnishings overlay. We have found in our office that all of this information is pertinent to the mechanical and electrical engineers as they produce their drawings. Once this information is complete, we prepare a composite print on mylar of the information on the base sheet, reflected ceilings and fixtures, and furnishings overlays. This composite information is registered via the seven holes to the original drawings which were used in its preparation. This information, in its printed form, is then given to the mechanical and electrical personnel. They use this information as their base sheet for the preparation of their drawings since it contains all of the information which affects both their work and the work of the architectural personnel. This eliminates the problem of coordination of information. Should changes occurduring this process to any of the drawings, the change is made by the architectural personnel on their base sheet and the various overlays. A new composite is then made with the area changed being circled. This information is then given to the mechanical and electrical personnel who are responsible for changing their information. This has proven to be a very efficient communication tool between the personnel in our office. I might add that this system is also working quite well on projects where we are using mechanical and electrical consultants who are not part of our in-house personnel.

One of the other practices which we employ in our office relative to drafting is what we refer to as modular drafting. Basically, what this amounts to is that our standard drawing sheets are broken down to a 4″ × 4″ grid. The purpose of this is to provide some uniformity in the placement of details, plans, and their titles. This 4″ × 4″ module is indicated with marks on the top and left hand margin of our standard sheet sizes. It is also noted on the sheet analysis form which is used by the project managers and job captains laying out the drawings prior to commencement of the drafting. There is also a standard method in which titles and detail numbers relate to this 4″x4″ module, which then results in the consistency and composition of sheets.

In order that we can continue to improve the quality and efficiency of production of the contract drawings, a file of standard details has been established. When used correctly, the file eliminates the unnecessary duplication of details from job to job, thus eliminating the possibility of errors, allowing the procedure for refining details based upon experience, and creates a catalogue of details for future reference. Instructions for its use as we use it in our offices is outlined as follows:

On each project the project manager and/or job captain will be responsible to review the standard detail file and pull copies of all applicable details. These details will be reproduced onto adhesive backed mylar for transparent prints or other forms for opaque reproduction and then adhered to the drawing sheets. The details follow the 4″ modular format previously discussed. Any detail which needs to be drawn on a project which is not presently in the standard file which might have application on future projects is drawn on standard detail forms and then transferred to the working drawings in the manner previously described. The filing system for standard details is based upon the Uniform Construction Index. Before any detail reaches the standard detail file, it must be presented to the department manager for approval. As a matter of standard practice, it is also routed to the specifications department and the construction administration department for review. In the event that it relates to other departments, the department manager will circulate it for approval. It is the individual responsibility of the project managers and job captains to be familiar with the contents of the standard detail file. We have, however, selected a person within the office to be responsible to see that the file is kept in order and that periodic review is accomplished by all persons within the office. We have also established that the construction administration department has the responsibility of feeding back information to the department managers in the event that problems are uncovered with any of the details during the construction stage. With this feedback the standard details are continually updated to remove construction problems, consequently resulting in better quality in the drawings produced.

Another form of standardization which we use is that of standard abbreviations, symbols, and material designations. All of these have been collected into one series of schedules which is reproduced on a single sheet and bound within the general section of

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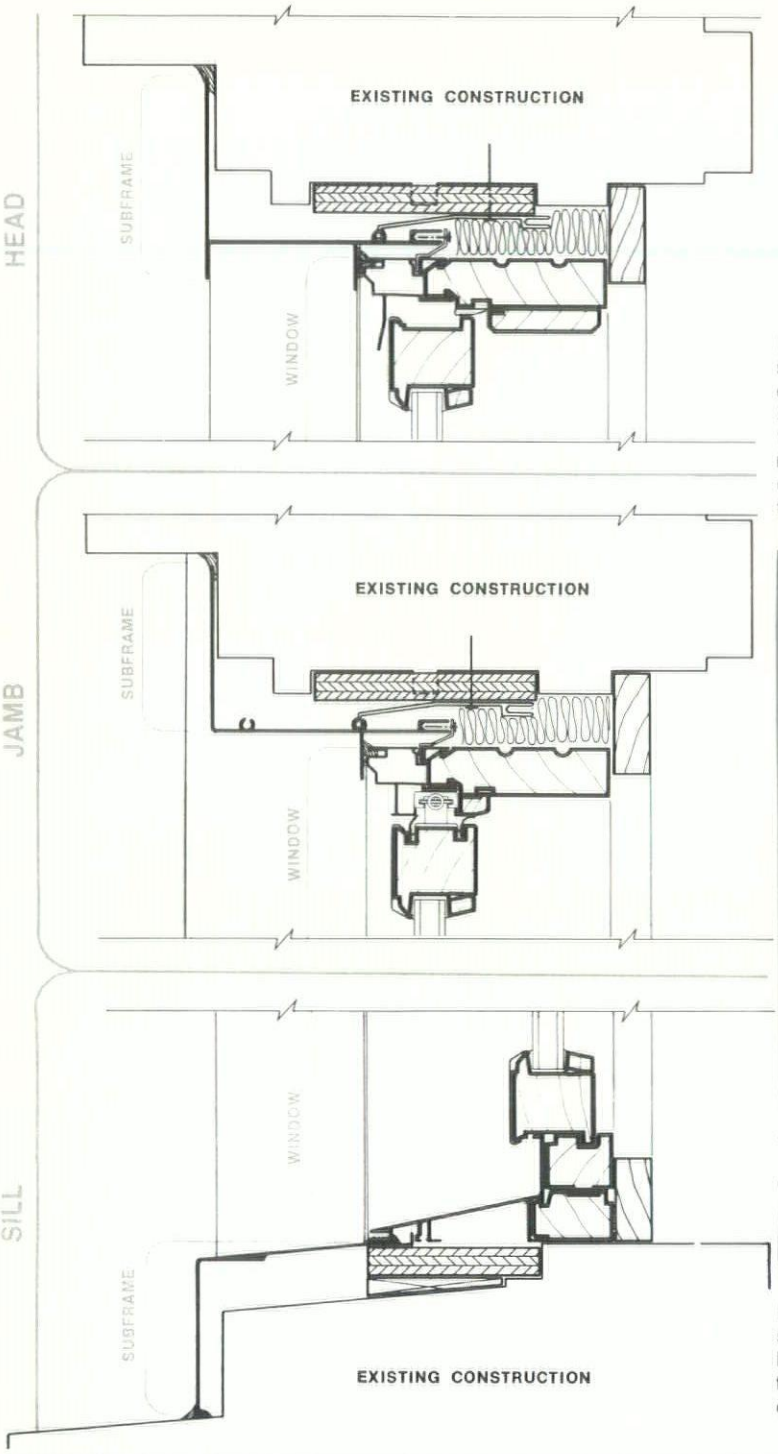

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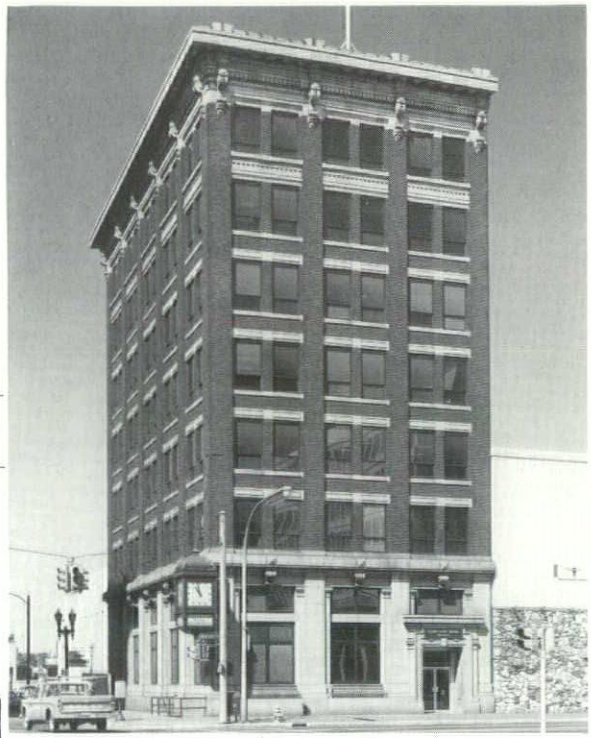

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Drafting (continued from page 11)

the documents. Since there is normally little change in this material from project to project, these sheets have been made up for each of the standard sheet sizes which our office employs. They are printed and filed away so when a project is started a particular sheet can be pulled, the necessary title block information added, and it becomes a part of the contract drawings. In our office, deviations from the established standards are not allowed. Hindsight, as always, may prove that revisions are necessary and in this case the standards will change.

Another process which we use rather extensively is transparent stick-ons. In the event that we have an original which is transparent, we can run it through the ammonia process machine onto adhesive-backed mylar. This is then adhered to the drawing via its adhesive. In the event that the original is not transparent, then we can produce a transparent stick-on via the office copy machine. In some cases, we may elect to use an opaque stick-on rather than a transparent one. In this case, the machines mentioned above could also procude an opaque copy which is then taped to the drawings.

Having established the above procedures for what we would term our manual drafting practices, we have currently been seeking the development of computer techniques to assist us in the development of the contract drawings. We, as many other firms, use the computer for structural stress analysis. We, however, have modified the structural programs to produce schedules for columns, beams, and slabs. These are printed out in a form which can be photographically applied to the drawings and used then as the communication method to the contractor for bidding and construction purposes.

We have also established a standardized hospital equipment list which lists all of the equipment through historical analysis that applies to this specific building type. This equipment is then given a four digit numbering system and the equipment is broken down between that which is contractor furnished and installed, that which is owner furnished/contractor installed, and that which is owner furnished/owner installed. This information is then listed out on a schedule complete with all pertinent physical information and mechanical and electrical connections which must be made to it. This list is also complete with all mechanical and electrical equipment going into the project. This results in a standardization of equipment identification, a consolidation of schedules into the general section of the drawings, and a consistency of identification of equipment from project to project.

We have also established within our office a computerized door, frame, and hardware schedule. This has been developed into a master system whereby the project manager or job captain first establishes the design parameters. Codes are assigned to these

design parameters for the door, the frame, and the hardware; this being a two letter code for each. This two letter code then forms the base input data which is fed into the computer and remains consistent from project to project. The project manager or job captain then completes the work sheets for each project which identifies the opening numbers and describes the door, frame, and hardware via the two digit code for each. This material is then proofed and the program executed. Some of the built-in features in the program, for example, are hinges for a door are automatically sized and quantified based upon the door size which was entered under the door code. In addition, in the event that a labeled door might be selected under the door code, it must also be selected under the frame code and the appropriate type of hardware selected from types available. In the event that this does not occur, then the program automatically prints out an error message. In other areas where a mismatch has occurred or where a door was scheduled without a frame or without hardware, this is also printed out as an error and is flagged to be checked. If necessary, once the initial program has been run, it can be revised and re-executed. It is then printed out in a form which is tabulated and photographically reproduced on the drawings. An additional feature of this program is that it is capable of printing out this schedule in a number of forms, whichever will be easiest for a specific project, as far as checking, etc. Shortly it will also be possible for us to quantify all of the information contained within the door, frame, and hardware schedule which will assist us in our own in-house estimating purposes. There has also been some strong interest expressed from material suppliers and contractors of these materials to actually purchase from us the quantification which is contained on the drawings. This may be pursued in the near future.

Another computerized system which we use, which directly relates to the drafting process, is what we call our contract document monitoring program. In this case, we utilize the listing of sheets along with the base sheets and overlays which was established before commencement of contract documents. To these we assign the percent of the total each base sheet and overlay has to its composite sheet when finally printed. Then on a periodic basis we go through the drawings and determine the percent complete of each base sheet and overlay. This information is then entered into the computer and we receive back the percent complete by section of the drawings, the equivalent number of sheets remaining to be completed in each section, the percent complete for each department, and the last assigned base sheet. We do this on a periodic basis depending upon the type of project and its schedule and use this for the assignment of personnel to a

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under the direction of a job captain. As we monitor the progress of each of these sections, looking always toward the final goal of the completion of the documents, it is sometimes necessary to shift personnel from one section of drawings to another. By use of this monitoring program, it enables us to determine not only if the project is proceeding on schedule but if each of the sections is proceeding on this same schedule.

In conclusion, I would like to state that the processes as described above have come to us as a result of many years of research and evaluation and experimentation with techniques. We have made a concerted effort to send our employees to continuing education programs where they could learn of new techniques. Perhaps more importantly, we have not only permitted experimentation with our contract drawings among the employees, but have actively solicited this experimentation. In addition to this, we have not tried to develop these drafting systems in a vacuum. We realize that the success of any drafting system is first of all going to be based upon its ability to be used once it leaves the office, and secondly on the economics involved. No system can be successful without both of the above being accomplished. In order to assure that our documents would be accepted and could be utilized once they left the office and were used in the bidding and construction processes, we actively solicited comments from contractors on our documents as each experiment developed. We ask them specific questions depending upon what the experiment may be and also solicit their general comments relative to their impressions of the drawings. Some things we have tried have not been totally successful, but without having tried them we would never have known. The contractors and material suppliers using our drawings in this area have been most free with their comments and their criticism. Knowing that it would be accepted contructively, they have given it to us constructively.

As stated in the introduction, the goal which was established for our drafting practices seven years ago was to improve the quality and appearance of our drawings at the same time resulting in more economy in their production. I have already mentioned what we feel to be the success of the quality and appearance of our documents. I would like to relay to you a few facts concerning the economics of the documents. A normal design fee as broken down by the AIA contract would have schematics 15%, design development 20%, contract documents 40%, bidding and negotiations 5%, and construction administration 20%. As a result of drafting practices project. It is also used to make personnel shifts on major projects where we might have specific per-

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The Iowa State Building Code— What Is It?

Glenn E. Lundblad, AIA
Advisory Council Member
Iowa State Building Code

The 1972 General Assembly of the State of Iowa passed an Act to institute an Iowa State Building Code. A seven man advisory council and a building code commissioner were established on July 1, 1972 The first I.S.B.C. became effective on February 1, 1973. Revisions have been approved by the Council on June 1, 1974 and just recently on May 26, 1977 to incorporate the 1973 and 1976 editions of the several model codes comprising the I.S.B.C.

The I.S.B.C. is applicable as follows:

1. To the manufacture and installation of factory-built structures.
2. To all buildings owned by the State of Iowa or an agency of the State of Iowa.
3. In those governmental subdivisions which, by ordinance or resolution, have adopted the I.S.B.C. as their local building code.
4. To all buildings and structures intended for use by the general public, insofar as requirements for the physically handicapped are concerned.

The Iowa State Building Code presently includes the following model codes:

The Uniform Building Code, 1976 edition.
The National Electrical Code, 1975 edition.
The Uniform Mechanical Code, 1976 edition.
The Uniform Plumbing Code, 1976 edition.
The one and two-family dwelling code, 1975 edition, may be used as an optional alternate to the above codes for one and two-family dwellings only.

Wherever the Code is applicable there is a plan check requirement and a fee schedule established. The next logical step, not yet implemented, is the field checking process to ascertain compliance. It is at this point that Architects should take particular note. Level upon level of building inspection has seldom resulted in a perfectly constructed building. In fact, it more often results in conflict and a less effective process of observation of the work, (i.e., "If he's going to check it, I won't need to".) There is always a dollar cost for additional inspectors to be borne by someone.

As Architects, we have a strong stake in the construction system. We are assigned rather well described responsibilities insofar as our client is concerned. We have been well trained in the design process. We rely heavily on the training and experience of other professionals for the structural, mechanical, electrical, acoustical, etc. phases of each project. We put together a project with considerable expertise, and we don't like regulatory agencies telling us what we can and cannot do!

I submit this resistance to regulation is not necessarily unique to Architects. From the youngest child to the oldest adult, we resist regulation and, more particularly, increasing regulation by Federal agencies. I am convinced, however, that we shall always be faced with regulations - some good, some bad. Regulations developed at the Federal level are of the greatest concern, for we have little or no input into their formulation, and it would certainly appear rules at that level are formulated by theorists, rather than those who must work with them (OSHA, HUD, etc.)

The Architect's client places great responsibility upon him. Included is adherence to applicable building regulations. If we are really honest with ourselves, we must agree to regulation of the construction industry by code, for there are so many diverse groups involved in it. Architecturally designed buildings (a small percentage of the total) should be more functional, esthetically pleasing, maintenance free, etc. and come closer to meeting all building regulations than other buildings. Carrying out the design process is the Architect's role, and he is expected to be good at it.

Architects are generally **not** as well versed in building code regulations as they are in other aspects of the design process. It is generally not enjoyable to sit down and study the applicable building codes. Among other things, they conflict with one another. The I.S.B.C. has solved this problem to a great extent, but not completely. (It is not the official building code in all communities across the state and, therefore, conflicts remain.

If Architects are really going to assume responsibility for adherence to building codes, they must plug building regulations into the design process. Many of the problems which develop at the plan check stage could have been resolved if building code requirements had been stronger input at the design stage. Likewise, field construction personnel with building code knowledge could avoid the need

(contined on page 23)

NEWS

Architectural Firm Wins Top Plywood Design Award

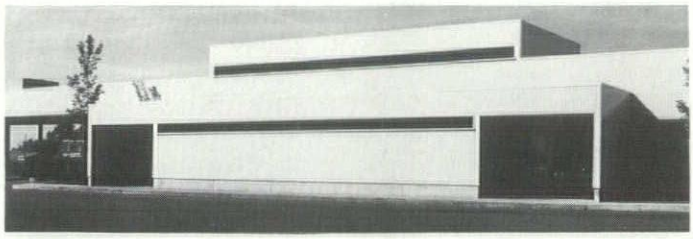
For the second consecutive year, the architectural firm of Charles Herbert and Associates has received the top award in the Plywood Design Awards program's commercial/institutional category.

The firm, which last year received the $1,000 cash prize for the Home State Bank Drive-up office in Jefferson, Iowa, and a citation of merit for the American Federal Savings and Loan office at Southwest 9th and Caulder in Des Moines, was honored this year for the Wakonda branch of the South Des Moines National Bank.

The bank is sided with MDO Texture 1-11 plywood siding. Plywood was also used for wall and roof sheathing, the box beam that serves as an interior sun screen and millwork.

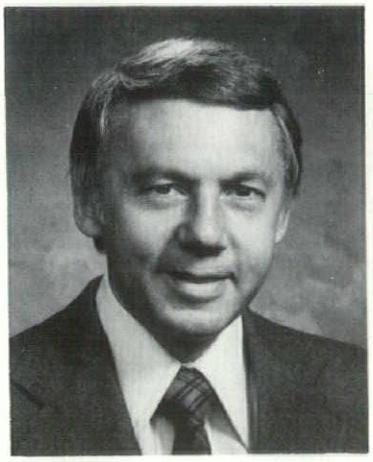
"The simplicity of this structure makes it stand out against the automobile forms in the parking lot," said jury chairman Paul Rudolph, FAIA, New York, and jurors William Bain Jr., FAIA, Bellevue, Washington and John D. Bloodgood, AIA, Des Moines, Iowa. The jury also cited the boldness and simplicity in handling exterior volumes and the appropriate use of color inside and out.

Charles Herbert and Associates is one of eight firms honored this year by the American Plywood Association and Professional Builder magazine, which sponsor the program to recognize outstanding aesthetic and structural applications of softwood plywood.



NEWS

Bob Broshar Elected To AIA College Of Fellows



Robert Broshar of Waterloo has been elected to the College of Fellows of the American Institute of Architects.

Fellowship is a lifetime honor bestowed for outstanding contribution to the profession. (All Fellows of the AIA may use the initials FAIA after their names.) Investiture of the 56 newly elected Fellows will take place on June 5, at the annual convention of the American Institute of Architects in San Diego, California.

Broshar, a principal in Thorson-Brom-Broshar-Snyder, Architects, has combined his architectural career with community involvement. Long active in the YMCA, he is past president of the Board of Directors and currently serves as Chairman of the Endowment Committee.

He is also a member of the Board of Directors of the Waterloo Chamber of Commerce and First Federal Savings and Loan Association, and serves as a member of the Governor's Committee on Employment of the Handicapped. In 1975 he received the Outstanding Citizenship Award from the Iowa Easter Seal Society for his role as chairman of a state-wide project surveying federally funded buildings for accessibility to the handicapped. The activities of this committee and its published report-ACCESSIBILITY, THE LAW AND THE REALITY, led to the new federal legislation and a commendation for the Iowa Chapter, AIA from the President's Committee on Employment of the Handicapped.

As an architect he has had principal responsibility for a number of hospital projects, including the major expansion work at Allen Memorial Hospital, Waterloo; and the Marshalltown Area Community Hospital. He was the principal in charge of the ConWay Civic Center in Waterloo, which received an Honor Award for design this year from the Iowa Chapter, AIA.

NEWS

Announce Iowa State Engineering Awards

The College of Engineering's Marston Medal and 13 Professional Achievement Citations were awarded during Iowa State University's Alumni Days.

A Professional Achievement Citation for superior technical or professional accomplishments in research, development, administration, education and other engineering activity was presented to H. Kennard Bussard of Des Moines.

Bussard is president and a founder of Wilkins Bussard Dikis Ltd., Architects and Planners, Des Moines. He is registered in four states and formerly practiced in California. His firm has designed buildings for colleges, universities, high schools and industry. He received his bachelor of architecture degree from Iowa State in 1960.

Plywood Design Awards

December 1, 1977 is the deadline for submitting entries in the 1978 Plywood Design Awards program.

Sponsored by the American Plywood Association and Professional Builder magazine to recognize outstanding aesthetic and structural applications of softwood plywood, the program includes $1,000 cash awards and citations of merit in four categories. They are residential/single family, residential/multifamily, commercial/institutional and vacation homes.

John Louis Field, San Francisco, will be jury chariman. Other jurors will be Victor Christ-Janer, New Canaan, Connecticut, and John D. Bloodgood, Des Moines, Iowa.

For entry forms and information, write Plywood Design Awards, P.O. Box 2277, Tacoma, Wash. 98401.

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NEWS

Hansen Lind Meyer Open Chicago Office

Hansen Lind Meyer, PC., an interdisciplinary firm of architects, engineers, planners and designers based in Iowa City, Iowa, today announced the opening of an office in Chicago, Illinois. Mr. Jerry Quebe, A.I.A., a Principal in HLM, has relocated to Chicago and serves as manager of that office.

The opening of the Chicago office is prompted by approximately 96 million dollars of construction design work for clients in the Chicago area. These clients include a major Chicago hospital and a large pharmaceutical company. The Chicago office will also serve HLM's clients in the surrounding areas of Illinois, Wisconsin, Indiana and Michigan.

During Mr. Quebe's 12 years experience with HLM, he has gained national recognition for his pioneering efforts in the area of architectural production. His efforts in this area have led to his serving as a consultant to a number of architectural and engineering firms, assisting them in establishing contemporary production techniques.

Environmental Award

The McAninch Corporation of Norwalk, Iowa, has been honored as the first contractor ever to receive a Rock Island District Corps of Engineers Award for an Environmental Harmony Project. Shown at the award presentation during the Associated General Contractors of Iowa state convention are, left to right, Del Cramer of Cramer Brothers, Inc., Des Moines, Dwayne McAninch of McAninch Corporation, and Merlyn Christensen, the Waterloo area engineer. Christensen was representing Colonel Daniel Lycan of the U.S. Army Engineer District, Rock Island.

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sonnel assigned to specific sections of the drawings coupled with project management in our office, we budget between 32-35% for contract documents. The resultant 5-8% savings has been allocated to design and construction services. This has enabled HLM to increase the overall professional services to our clients which, afterall, is what a client employs us for.

The techniques described above, although not new, are only now beginning to receive more widespread use throughout our industry. "Widespread" may not be the correct term. My speaking and consulting work on the systems reveals use by only 5-10% of the firms in the country. To remain competitive professionally and economically, however, will require use to some extent by most firms in the near future.

Code (continued from page 18)

for an additional level of inspection at that stage.

Not all building regulations are good ones. The people who formulate and administer building regulations do not always make good decisions. The process, however, is the only one devised to date and provides opportunity for input by interested outside parties. We, as Architects, must become interested outside parties, study existing codes and regulations, and know what we're talking about when we seek changes. Then, and only then, can we become a force in developing codes and regulations which are acceptable to the design profession.

The Iowa State Building Code is as good as any other State Building Code, and better than some. It is an assemblage of model codes which have been in use throughout the State of Iowa, at least in the larger cities, for many years. The potential hazard in the present system lies with those who formulate, approve, administer and use the code--all human beings. The Building Code Commissioner and Advisory Council need constructive criticism (and support, when earned).

I urge the Iowa Chapter AIA give serious thought to establishing a seminar on the Iowa State Building Code. Architects can and should be a conservative force in this facet of the building process. Building codes are destined to stay with us, and we should be a part of the solution.

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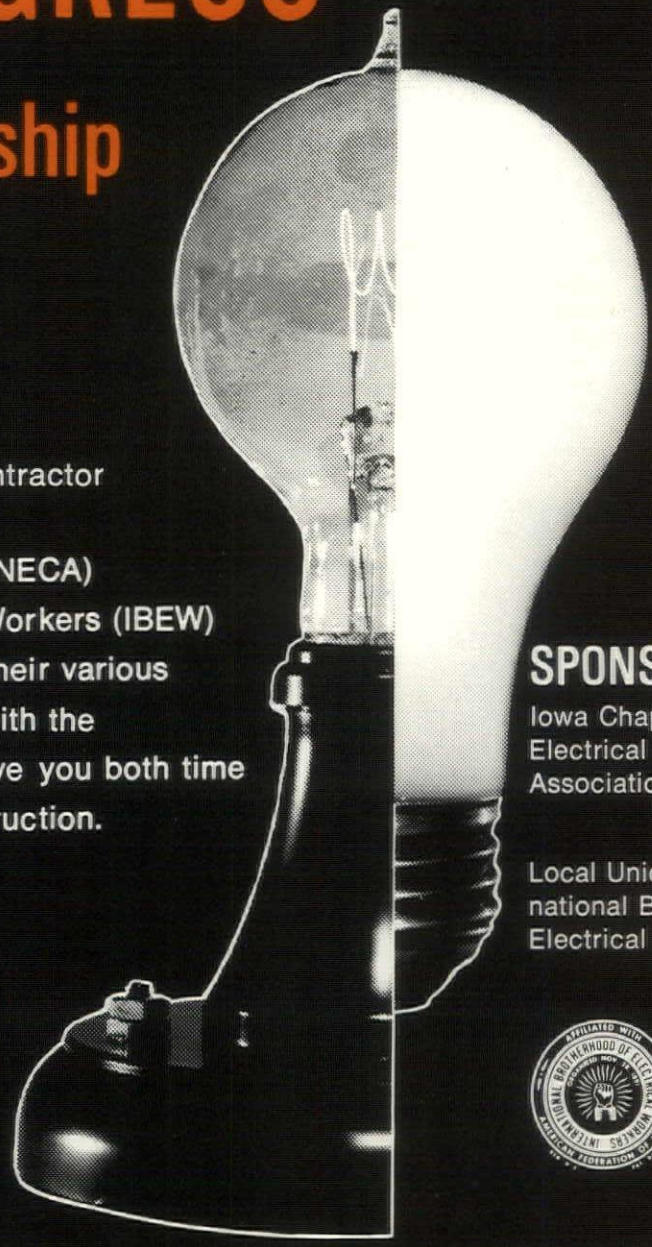

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