we do strange things to concrete

We make masonry & concrete self protective. . .not by coating. . .but by penetration, with products of Paratron Chemistry that become an integral part of the material creating an electron barrier against harmful elements.

Masonry and other building materials treated with Chemprobe products of Paratron Chemistry are not only water repellent but are resistant to stain damage, freeze-thaw apalling and cracking, efflorescence, inner wall wetting, mortar decay, fungi and mildew and many other factors that cause surface deterioration. When applied to masonry and other concrete surfaces it serves as a superior primer for paint application. Since the treatment becomes part of the substrate material, paint applied over the treatment is retained at the surface for increased appeal and performance.

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IN THIS ISSUE

is the annual roster of members of the New Mexico Society of Architects and members of the newly merged organization representing professional interior designers, the American Society of Interior Designers (ASID). Last year on this page it was reported that negotiations were underway. Now the merger of the American Institute of Interior Designers and the National Society of Interior Designers is a reality. See page 9 for details.

After many, many months of persistent effort, the Doric Credit Union is open for business. Charles Nolan, its first president, has pushed, pulled, dragged and finally, yanked the papers through the bureaucratic maze. A membership drive is on. See details on page 11.

—JPC

(After many, many months of persistent effort, the Doric Credit Union is open for business. Charles Nolan, its first president, has pushed, pulled, dragged and finally, yanked the papers through the bureaucratic maze. A membership drive is on. See details on page 11.

—JPC)
FLEX SHIELD
waterproof flexible texture coating
used on the exterior of the new
J. Korber & Co. Building
2400 Menaul Blvd., Albuquerque
Architect: Stevens, Mallory, Pearl & Campbell
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NMA March - April 1975
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ALBUQUERQUE, NEW MEXICO

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Architect: DAVID WERNER
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Use something to insulate cavity and block walls.
How about jawbreakers?

Whenever the temperature differs on the inside and outside of these walls (that's all the time), convection occurs in the cavities. The more different the temperature, the bigger the wind in the voids. The wind carries therms from the side where you want them to the side where you don't. These walls are as good as—or better—than other kinds of walls. But like all walls, they need insulation. Without it the occupants are as miserable as the heating and air conditioning bills.

Zonolite® Masonry Fill Insulation: better than everything
Zonolite Masonry Fill Insulation was developed specifically for these kinds of walls. It doubles their insulation value; a real boon to mankind. Keeps inside wall temperatures comfortable and the heating and air conditioning bills easy to take.
Zonolite pours right into the voids, fills them completely, never settles. It is water repellent; any moisture that gets into the wall drains down through it and out.
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Somehow using jawbreakers doesn't sound like a good solution to the problem of insulating masonry walls. Send me Zonolite Masonry Fill Insulation Folder No. MF-83, with complete technical data and specifications.

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NMA March - April 1975
The economies of masonry

New ideas in masonry mean a more profitable business for you

**New ideas in engineering**...we'll show you how engineered masonry can cut 10%, 20%, even more, off your initial masonry costs, and permit much taller, stronger walls. Walls as high as 40 feet...with no structural steel, no pilasters. All masonry - built with strength to stand the test of time.

**New ideas in economics**...we'll show you how masonry provides more initial savings through speed of construction, then continues to save you money over the life of the building. You save on energy requirements. You save on insurance. You save on maintenance. And we'll prove it to you with a computerized economic analysis of your next project.

**PLUS:**
**Age-old ideas in esthetics**...in the past we've already shown you a few examples of the added advantage you get with masonry - a beautiful building. Brick and block are materials of a human scale. They allow you to enhance the image of your business and your community. While you save money at the same time.

Whether you build to occupy or to lease, masonry has the answer:

- Low initial cost
- Speed of erection
- Early occupancy
- Lower financing costs
- Quiet environment
- Flexibility of design
- Long life of structure
- Low life-cycle cost
- Reduced heating costs
- Reduced cooling costs
- Low maintenance costs
- Low fire insurance rates
- Excellent tenant appeal
- High resale value

No other building material gives you all these advantages!

**MASON CONTRACTORS ASSOCIATION OF NEW MEXICO**
AID + NSID = ASID

THE AMERICAN SOCIETY OF INTERIOR DESIGNERS IS
THE UNIFIED VOICE OF AN EXPANDING PROFESSION

January 1, 1975 marked the beginning of a new era in the history of the interior design profession. The date also marks the culmination of a two year period of dedicated effort on the part of the Consolidation Committee members, Officers, Board members and headquarters personnel of both the American Institute of Interior Designers and the National Society of Interior Designers.

The two organizations, each justifiably proud of its own heritage, agreed that their respective strengths and weaknesses could be combined into one organization to increase their strength and minimize their weakness.

On July 6, 1974 in Denver, Colorado, at the first and only joint National Conference of NSID and AID the respective memberships of the two constituent organizations voted overwhelmingly to accept a plan of consolidation of the two organizations as well as an initial set of bylaws for the new corporation.

The American Society of Interior Designers began its existence with the firm conviction that the common good of all designers can best be served by one voice speaking for the profession.

With this new beginning, the former members of AID and NSID found themselves members of ASID and heirs to nearly a half-century of dedication on the part of the thousands of members who preceded them in the two organizations. This dedication was by people who believed strongly that all designers would benefit by association with each other. It worked for both organizations and the future is bright for the same concept to exist within ASID.

For many years prior to the consolidation the two organizations operated as two separate entities on nearly parallel tracks. Many false assumptions existed and only through several common efforts were these assumptions replaced by facts.

In January 1970 an idea was proposed to begin a joint venture in behalf of education. By June of that year NSID, AID and the Interior Design Educators Council formed the Foundation for Interior Design Education Research and thus a bridge existed between the two organizations.

The almost immediate success of F.I.D.E.R. encouraged the leadership of the two organizations to sit down to discuss the qualification and registration of interior designers. In January of 1971 a meeting of representatives of the two organizations was held. The outcome was the formation of the National Council for Interior Design Qualification. Several other professional organizations joined the AID/NSID effort and N.C.I.D.Q. quickly became the examination and certification body for both organizations.

As leadership and members worked together in F.I.D.E.R. and N.C.I.D.Q., suspicions and prejudices seemed to evaporate in the spirit of cooperation. Within a year Warren G. Arnett, FNSID, president of NSID and Bernard S. Vinick, FAID, president of AID met to discuss further cooperative efforts and by the end of the meeting the idea for consolidation was given new emphasis.

An agreement to discuss consolidation resulted in the formation of a committee of members from the two organizations who began the long task of developing a plan. Their efforts were rewarded at the Denver, 1974 meeting.

The new Society will be responsible in all its programs to its members, to educators and students of interior design, to the public, to the trade, to government, to the community and to professionals in other environmental disciplines.

The larger membership and annual budget make it possible for the new Society to have a greater impact on the professional problems that are inherent in the practice of design, and to exert more influence in the areas of education, legislation, professional ethics and on the life styles of all people.

The purposes are detailed in the bylaws and will continue to grow in number and conviction as membership and the public demands bigger and better things from the Society.

The first slate of national officers of the world's largest association of professional interior designers was elected last fall in Portland, Oregon, during the final National Board meetings of the American Institute of Interior Designers and the National Society of Interior Designers. They took office January 1, 1975, when the two organizations consolidated into the American Society of Interior Designers (ASID).

Norman DeHaan, FASID, former president of AID, is the new president of ASID. Mr. DeHaan is president of his own Chicago-based firm, Norman DeHaan Associates, Inc., and widely known for his work in the contract field. Richard W. Jones, FNSID, former president of NSID, is the first vice president. A designer of both contract and residential interiors, Mr. Jones is also a partner in Circanow, a design studio in Des Moines, and interiors and design editor of Better Homes and Gardens Magazine. Other officers will be: Boyd L. Loendorf, FASID, of Mercer Island, Washington, treasurer; H. Albert Phibbs, FASID, of Denver, secretary; and Dede Draper, FASID, of New York, past president.

ASID will have forty-four chapters throughout the country, and members-at-large around the world, with a total membership of about 13,000. It will also include student members and an ASID Industry Foundation.

NMA March - April 1975
Nothing we say about our tile can tell you as much as this photo.

Take another photo in 10 years and it’ll be even more beautiful.

We could describe what goes into San Vallé genuine clay tile—the ingredients and the process—and explain how well it insulates and protects. But you choose a roofing material primarily on the basis of aesthetics. And that’s where San Vallé tile’s permanent beauty becomes a deciding factor.

You wouldn’t settle for a poor substitute. Would you?
THE DORIC CREDIT UNION

is a reality

Architects, Engineers, their Employees, Wives
and Children encouraged to join.

The Doric Credit Union is now established for New Mexico architects, engineers, their employees, and dependents. The credit union will provide an investment opportunity for those eligible and will also be a source of low cost loan funds for its members. The deposits of the credit union members are fully protected by federal insurance and all operations of the credit union officers and employees are financially bonded to prevent loss of any member's deposits by theft or unauthorized financial transactions.

The Board of Directors of the New Mexico Society of Architects decided in 1973 to sponsor such a credit union after taking a survey of potential member interest. The response was favorable; a request was made to the New Mexico Credit Union League for assistance in making the necessary applications to the State of New Mexico. Review of applications for formation of a credit union, a non-profit state corporation, and federal insurance has taken over a year to complete. The initial officers elected from the incorporators are Charles E. Nolan, Jr., AIA, Alamogordo architect as president; Bob Bruning, Albuquerque engineer as vice president; Bob Campbell, AIA, Albuquerque architect as secretary-treasurer; John Conron, FAIA, Santa Fe architect and John Varsa, AIA, Albuquerque architect as directors. New directors and officers will be elected in 1976 from all credit union members.

A membership drive is currently underway among architectural and engineering firms. New credit union members are required to fill out a membership card, pay an initial enrollment fee of 25c, and make an initial deposit of at least $5.00 which buys one share of credit union ownership. Eligible members: New Mexico architects, engineers, their employees and dependents, may contact one of the officers or directors to obtain information and membership forms. Payroll deduction forms are also available and encouraged.

The principle of credit union operation is for the members to save their money jointly for increased investment savings and to provide a source of funds for low interest loans to the members. The Doric Credit Union will adhere to this principle and plans to be open for loan applications, by mail or in person, by May 1, 1975. Further information on location of the credit union office, loan application procedures, and operations will be submitted to enrolled members when these matters, now developing, are finalized.

Charles E. Nolan, Jr., President
HOW TO FIND EVALUATE SELECT NEGOTIATE WITH AN ARCHITECT

When you embark on a major construction program, you are in fact committing your organization to what may be a multi-million dollar investment in an unknown quantity. While it is possible to define the proposed facility in terms of size, function, and certain other requirements, which together make up the "functional program" for the project, there are many imponderables.

How well and how long will the facility serve its intended purpose? Will it be responsive to the needs of its users and the community? What will it say about your image?

The architect you select to design the facility will be a major determinant in answering these questions. Investing in a construction project is unlike purchasing a commodity. Only a known need and a few ideas exist at the outset to define the scope of the project. These ideas and requirements become the basis for the architectural program, the conceptual design, and ultimately, the working drawings and specifications from which the facility will be constructed.

The individual primarily responsible for this process is the architect. The architect will determine the functional, aesthetic, and financial success of the project. During the process of design and construction, he or she serves as adviser, coordinator, and synthesizer, as well as creative artist. For a period of months or years, your architect effectively becomes a partner in your organization.

Obviously, selecting the right architect is not and cannot be a casual or offhand process.

What selection process works best?

Federal, state, and local governments throughout the country, and many independent commissions, school boards, developers, and others in private industry currently rely upon architect-selection procedures that have been formulated and systematized in the crucible of actual practice. This general procedure has been formally adopted and enacted into law by the federal government and a number of state governments for selection of professionals for the design of public projects. While the details may vary, the process includes these basic steps:

1. **Invitations** to a number of firms to submit information concerning their experience, qualifications, specialized abilities, personnel, and similar data. This invitation includes such pertinent data as the scope of the work, budget, and time limitations, together with some indication of the professional services to be rendered. It does not include a request for sketches, cost estimates, or the suggested compensation which the architect would receive.

2. **Evaluation** of these submissions to determine which firms appear best able to handle the proposed project. Evaluation criteria should include performance on previous projects, professional standing of the firm's principals, etc., as well as such performance factors as management, coordination, accuracy, completeness, and cooperation.

3. **Discussions** with representatives of the firms you have ranked highest, to narrow the field to those most qualified for the project at hand.

4. **Ranking** of the top firms (usually three to five) in order of competence, understanding of the project, and the ability to meet your budgetary and schedule requirements. This last consideration will to a great extent be based on the firm's personnel and its current and projected workload.

5. **Discussions with the top-ranked firm** to determine its ability to perform the required services within a stated time-frame and in accordance with budget requirements.

6. **Negotiation of the architect's compensation.** If a fair and equitable agreement on the cost of architect's services cannot be reached with the first-ranked firm, negotiations are officially terminated, and the second-ranked firm is invited to enter into negotiations concerning schedule, project budget, and compensation.

What should you know about the architectural firms which are under consideration?

In addition to such information as name, address, and telephone number, each firm should be asked to state the year in which it was established, the names of principals and the states in which they are registered to practice, the names of other key personnel with a resume of their experience, and the types of facilities for which the firm is particularly well qualified.

Besides this basic information, the prospective client should attempt to determine the firm's current and projected workload, number and type of support personnel, and some index of past professional accomplishments (for example, a list of previous clients during the preceding several years).

Continued on page 17
AZTEC
RADIANT HEATING®
Manufacturers and designers of low temperature electric radiant heating panels and systems for primary and supplemental heat for office buildings, schools, hospitals, clinics, hotels, motels, condominiums and residences.

A patented rough surface makes Aztec Radiant panels the most efficient way to provide heat in the world today. Your economical answer to conserving energy.

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PATENTED ROUGH SURFACE

MAKES AZTEC PANELS TRULY RADIANT, PROVIDING LOW SURFACE TEMPERATURE (UNDER 200°F) AND BROAD HEAT DISTRIBUTION

Clean, gentle, comfortable heat that is ideal for offsetting perimeter heat loss or neutralizing downdrafts over glass. For use as primary or supplemental heat, saving substantial energy over other systems by heating people and objects rather than all the air in a room or building.

Aztec panels give you back your walls, let you use all your floor space. No noise. No moving parts. No maintenance. No ceilings, walls or drapes to clean. No dried out air.

Aztec panels can be laid into T-Bar ceilings, surface mounted on ceilings or walls, recessed between ceiling joists or suspended on ropes or chains.

The only radiant panel manufacturer offering all sizes (2' x 2' through 2' x 8') for all voltages (120/240, 208, 277) with a choice of high or low watt densities. All panels UL listed. All with 10 year warranties.

CUTAWAY DRAWING OF HEATING PANEL

24 GAUGE GALVANIZED STEEL BACK OF UNIT

1 INCH, 1 POUND DENSITY HIGH TEMPERATURE FIBERGLASS INSULATION

ELECTRIC HEATING ELEMENT

POWDERED GRAPHITE BETWEEN SHEETS OF ASBESTOS INSULATION

DIELECTRIC INSULATION

22 GAUGE GALVANIZED STEEL FRONT OF UNIT

CRYSTALLINE SURFACE

RADIANT HEAT WAVES

Moisture and condensation do not affect Aztec Panel performance. Panels being used in shower rooms and swimming pool areas will be totally sealed with silicon.

COVER: Top left: Aztec radiant wall heaters decorated with original art provide total heat for a school cafeteria. Top right: Surface mounted ceiling panels provide total heat in outside corridor of a ski lodge. Bottom left: Wall heaters painted deep red form part of the decor in a restaurant/bar. Bottom right: T-Bar ceiling panels running the perimeter of this new office building, provide total heat.

AZTEC RADIANT HEATING®

Aztec Radiant Panels can heat glass corridors.

The millions of tiny crystals on the panel surface diffuse the radiant heat the way a light diffuser illuminates a room, eliminating the "hot heads" associated with flat surface panels. The crystalline surface also concentrates the radiant energy in the 8-10 micron range, a wavelength humans love, that is not color selective (white absorbs as much as black) and will not pass through glass, but is absorbed instead. Aztec panels will warm a perimeter wall, warm the glass and warm the floor, eliminating downdrafts. Panels can be used to heat glass corridors (above...five white T-Bar 2' x 4' panels), to offset heat loss through big picture windows (center...2' x 2' and 2' x 4' white T-Bar panels) or used in intensive care areas of newborn nurseries (bottom...with special surface mounts). Custom panels are curved to focus heat on work stations. A thermistor on the baby's body permits the doctor to dial the skin temperature at which he wants to keep the infant.

Medical examination rooms.

Intensive care areas, newborn nurseries.
AZTEC RADIANT PANELS AS PRIMARY HEAT WITH VARIABLE VOLUME AND TWO PIPE SYSTEMS

SUPPLEMENTAL HEAT WITH FOUR-PIPE AND DUAL DUCT SYSTEMS

The major market for Aztec Radiant Panels is providing total perimeter heat for new office buildings and schools, as well as other structures using variable volume. Ceiling panels offsetting perimeter heat loss permit full use of floor and wall space, and with proper controls can provide greatly increased personal comfort and substantial energy savings over baseboard or terminal reheat systems.

Three 2' x 4' 750W T-Bar panels are installed in this ceiling, one opposite the window, two by the wall on the right.

The panels normally are interlocked with the variable volume system so that the heating and air conditioning phases don’t fight each other. In many systems, such as the one being installed in upper right hand picture, an end switch is put on the damper so that when the system is calling for minimum air (in this instance 20 per cent), the circuits to the panels are energized, permitting the panels to work if the wall thermostats controlling them call for heat.

Primary heat for office buildings, schools, lodges.

SINGLE DUCT CONSTANT OR VARIABLE VOLUME SYSTEM

In other systems, the panels are controlled by outside solar sensors or by thermostats registering the inside skin temperature of the outside walls.

Substantial construction savings can be achieved through elimination of boilers and duct work. Aztec panels are as easy to wire as a light fixture. And ceiling wiring inherently is simpler and cheaper than floor or wall wiring required with baseboard.

Two pipe systems using a chiller for cooling and Aztec panels instead of a boiler for heat show substantial installation savings versus four pipe and dual duct systems, yet provide the individual with a heating/cooling choice. The same Aztec two pipe combination will show substantial energy savings and operating economies for motels and hotels versus heat/cool through-the-wall units.
T-BAR MOUNT
ATL AND ATH

The basic Aztec panel is designed to easily drop into any T-Bar suspended ceiling system. It is compatible with most standard colors and textures. T-Bar panels can be designed into new systems or added to problem areas in existing systems.

SURFACE MOUNT
ASL AND ASH

When it is desired to mount the heater with minimum cost and interference with the existing ceiling, all that is needed is access to a junction box and rafters or slab ceiling to which to fasten the frame. Panels also can be mounted on walls. The frame, furnished by the factory, is of extruded aluminum, easily mounted and maintenance free. Wood frames also can be used.

SPECIFICATIONS:
VOLTAGE: 120/240, 208, 277

<table>
<thead>
<tr>
<th>Panel Size</th>
<th>Wattage</th>
<th>Weight</th>
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<td>375</td>
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<td>750</td>
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<tr>
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<td>24&quot; x 96&quot;</td>
<td>1000</td>
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</table>

CONTROLS: Line or low voltage thermostats, SCR, outside solar sensors, timers, rheostats, on-off switches. Thermostats can be placed on outside or inside walls and will not be appreciably affected by the radiant energy. The greater the control, the greater the energy saving. Aztec panels, because of the powdered graphite used as a heating element, do not surge when turned on but begin operating at 96 per cent of capacity, slowly increasing to full power. High density panels have a surface temperature just under 200°F while low density panels have a surface temperature of approximately 160°F.
RECESS MOUNT
ARL AND ARH

Aztec panels can be obtained with a recess mounting frame where it is desirable to flush mount the heater in either plaster or drywall ceilings. Recess frames and heaters are available to fit between 24 inch C-C or 16 inch C-C ceiling joists. The heater and frame can be painted to blend with ceiling.

**SPECIFICATIONS:**
VOLTAGE: 120/240, 208, 277

<table>
<thead>
<tr>
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<th>Frame-Out Size</th>
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<td>ARL</td>
<td>ARH</td>
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INSTALLATION

ATL AND ATH T-BAR PANELS

Dimensions on preceding page

HOLD DOWN CLIPS

Hold down clips are installed on each 2' side of the heating panel (fig. 1). The short end of the clip is wedged behind the heating panel flange. Wiring: Make wire connections according to proper wiring diagram and lift heater into place making sure hold down clips hook over T-Bar (fig. 2).

ARL AND ARH RECESSED PANELS

Dimensions on preceding page

The ARL and ARH Recess Mounting Frame is a welded one-piece aluminum extrusion (fig. 5). Recessed panels require a cutaway in the ceiling and a method of supporting the panel (fig. 6). Insert the panel through the opening and make necessary wiring connections (fig. 7). Secure frame and lower panel in place. Do not distort frame. If joists are irregularly aligned, shims may be needed to properly place frame without warping. Insulation should be placed above heaters in attic areas.

ASL AND ASH SURFACE MOUNT PANELS

Dimensions on preceding page

ASL and Model ASH are constructed for surface-ceiling mounting. Each complete unit consists of a surface mounting frame, a heating panel, and two mounting brackets. Bring in the required power to operate the heater. When flush mounted, the junction box should be positioned so as to avoid interference with the connector mounted on the heater and to insure complete coverage. In this case, a 90 degree connector is mandatory. Secure the two mounting brackets using either toggle bolts or wood screws as required (fig. 9). Snap heater into mounting brackets and off center to insuire room to make the necessary electrical connections. Center heater within mounting brackets and place frame over the heater and secure by screwed four ½”, No. 7, flat headed sheet metal screws through the four side screw holes in the frame and into the continuous slots of the mounting brackets (fig. 10, fig. 11).
VERSATILITY

Aztec Radiant panels are a prime problem solver... at major savings in wiring and duct work... and by providing localized heat can produce major operating savings. Cold offices at the end of ducts can be supplementally heated with one or two ceiling or wall panels without having to increase the total heating capacity of the building. Secretaries, tellers, and receptionists can be given personalized, spot heat with Aztec panels of 225 or 375 watts to replace their 1320 or 1650 watt portable electric floor heaters. Older buildings with high ceilings and antiquated heating systems can easily be converted to economical Aztec Radiant heating. In the conversion of this courthouse, high in the Colorado mountains, where the design is 30°F below zero, 2'x8', 1500 watt panels were suspended on chains to the light level to provide total heat.

Aztec panels are economical for conversion of older school buildings using other fuels or needing additional heat because of reallocation of space. A T-Bar ceiling, Aztec panels and new lighting completely modernized the school room at right... with large energy savings. Aztec Radiant panels also are used as primary heat in portable and relocatable schools. Aztec panels inexpensively can upgrade two pipe systems in motels and hotels so that a guest in any particular room may have heat while all other rooms have air conditioning in the spring/fall change over periods. The conversion is accomplished with a single 750 watt 2'x4' surface mount panel for each room... usually with no additional electrical service required.

In the ski lodge below, baseboard installed in each room did not provide enough heat in winter. An Aztec picture heater was mounted in each room to solve the problem. Two stage thermostats bring on the Aztec heaters first, the baseboard only on very cold days.

Aztec panels (above) are recessed between ceiling joists to offset heat loss through large sliding glass doors in homes, condominiums and apartments. Surface mounted panels are selected for slab ceilings. Aztec panels provide heat in new and remodeled kitchens without interfering with floor or cabinet space.
MAINTENANCE AND REPAINTING

Aztec Radiant Heat panels may be washed or repainted. Only water based latex, acrylic or casein paints should be used. Oil based paints will discolor. Panels are suitable for original art, silk screening, or may be painted solid decorator colors.

APPLICATION AND ENGINEERING DATA

Aztec Radiant panels are effective to approximately 13' in height (centerline in chart below). The patented crystalline surface provides a broad distribution pattern of the radiant energy, producing approximately 10 times the radiant density at various distances (right side of chart) than can be generated by a panel with a flat baked enamel surface (left side of chart).

COMPARATIVE RADIANT DENSITY DISTRIBUTION CURVES FOR ATL-4 500 WATT HEATER

Aztec panels are not efficient outdoors or in areas of very high infiltration, but are extremely effective in offsetting heat loss through glass or perimeter walls. By warming walls, glass areas and also the floor, Aztec panels eliminate down drafts.

Consequently, Aztec panels should be located to offset perimeter wall or window heat loss areas or to compensate for specific cold spots. Ideally, panels are placed in or on the ceiling approximately two feet from the outside wall or window, but work almost as well immediately adjacent to the perimeter. Wall mounted panels should be placed to "wash" across windows or to provide radiant energy for people working in cold areas.

Aztech International or its nationwide system of manufacturer's representatives, will provide technical support service to architects and engineers to help determine the most efficient use of Aztec Radiant Heat panels for primary or supplemental heating.

WARRANTY: All standard panels are covered by a 10-year warranty.

SUGGESTED SPECIFICATIONS

General: The contractor shall furnish and install a complete electrical heating system as shown on the drawings and as called out in these specifications. The heating equipment shall be the type and size indicated on the drawings and shall be furnished complete with all fillers, end caps, sleeves, corner accessories, conduit, risers, couplings, and splice plates to give a complete and operating system consistent with good workmanship. The supply voltage for the electrical heating equipment shall be ______ volts, ______ phase, ______ wire, and the contractor shall set the taps on the system transformers to provide not less than 100% rated voltage at the heaters with the system in operation.

Substitutions: The heaters called out in the equipment schedule have been selected on a performance basis as the standard of type, quality, and operation. Requests for substitutions shall be made in writing to the Engineer and shall be in his possession at least 48 hours prior to the Bid Opening. Any requests received less than 48 hours before the bid opening shall be rejected. The request for substitution shall be accompanied by complete technical data including thermal and electrical characteristics, operating element and surface temperatures, air flow characteristics (for convective products), distribution curves (for radiant products), metal gauges, finishes, fan data, and internal wiring diagrams. The entire burden of proof of equality shall be placed on the contractor.

Requests for substitutions after the contract has been signed will be considered only within 20 days of the date of the contract and these requests shall include all data required for prior approval in addition to a statement by the contractor giving the reasons for proposing the substitution. If a difference in price is obtained through the substitution, the contract shall be modified by change order to credit the owner with any savings so obtained.

Low temperature radiant heaters: The low temperature radiant heaters shall be as manufactured by Aztech International, Ltd. under the trade name "Aztec." The quantities and locations shown are based upon specific radiant distribution pattern and intensity of the specified heaters and there shall be no departure from the system designs without the prior written approval of the Engineer. Radiant heaters shall have a ten year warranty on materials and workmanship.

Full Technical data may be obtained by contacting the Manufacturer. Aztech International, Ltd.
3434 Girard N.E.
Albuquerque, New Mexico 87107
(505) 345-5631

AZTEC RADIANT HEATING®
REPRESENTED BY-
HOW TO FIND AN ARCHITECT

—Continued from page 12

Visits to current and recent projects and discussions with their owners are also useful, as is information on the standing of the architect within the profession.

The federal government has developed a questionnaire (General Services Administration Standard Form 251) which its agencies use to solicit information from architectural and engineering firms about their experience, personnel, and general professional accomplishments. Many firms maintain completed copies of this form in their files. Such a document can serve as a valuable tool in screening a number of firms to help you determine which ones should be investigated further.

The actual selection is normally made by a committee or by an individual familiar with the procedures involved. It may be helpful to obtain the advice of a registered architect familiar with the type of project envisioned. Sometimes, for large complex facilities, an open pre-interview meeting is held, with all interested architects invited, to discuss the general scope of the project.

How do you determine the architect’s compensation?

Once a firm has been selected on the basis of its qualifications and its ability to perform the work required, fee negotiations begin.

Compensation for architectural services is established in several ways, including the following:

1. Lump sum—commonly used when the scope of services required is known or can be realistically determined in discussions with the selected architect.
2. Direct cost times a multiplier to compensate for overhead and profit—used by many clients for commercial facilities.
3. Percentage of construction cost—often used by state and local governments (although other methods are being used with more frequency in recent years). Under the percentage method, compensation is generally determined on a declining basis; i.e., the larger the construction cost, the lower the percentage. However, the relative complexity of the facility must also be considered in determining an appropriate percentage.
4. Cost plus fixed fee—The architect is paid a fixed fee for his personal professional contributions to the project and other office and consultant expenses are paid for on a basis similar to that in (2) above. This type of arrangement is sometimes used when the client desires the substantial personal attention of a particular architect, because of unusual project requirements and because of that individual’s special expertise in dealing with such requirements.
5. Per diem rates—sometimes used for unusual consultant services.

Architects and clients may also agree on a basis for compensation for other professional services which are not included in their contract, but which may conceivably be required at a later time. In addition, certain items such as long-distance travel and the reproduction of documents are paid for as direct reimbursables.

At the negotiating session, your preference as to method of compensation and the method the architectural firm considers appropriate should be discussed and a conclusion reached.

The General Services Administration (GSA) has had a wealth of experience in negotiating contracts for architectural and engineering services. One top-ranking GSA official has stressed the importance of positive attitudes during the negotiating process, saying, “A willingness to bargain and a flexibility to adjust during the negotiating process will lead to a successful conclusion. Rigidity and failure to recognize that negotiation is a two-way street will result in an impasse and termination of negotiation. In a truly successful negotiation, both parties at the conclusion should feel that they have obtained their essential objectives, and unreservedly stand ready to carry out their contractual obligations.”

Most architects have a copy of the AIA publication, "Architect's Handbook of Professional Practice," which includes further details on architect selection and methods of determining compensation. AIA also publishes many useful contract forms which reflect years of experience in the construction industry and which can be used in drawing up contracts for professional design services and for construction.

Why not contract for architectural services on a competitive-bid basis?

Many prospective building clients who are experienced in the procurement of commodities are accustomed to obtaining competitive bids. They may sometimes wonder why the same procedure is seldom used to procure professional design services. The reasons are many, and they lead to the same conclusion: When one seeks the creative skills of the architect, competitive bidding for professional services is not in the best interest of the client.

The submission of price quotations for architectural services is not a violation of the Standards of Ethical Practice of The American Institute of Architects. While an architect is free to state a fee, he must be careful not to violate any law, ordinance, rule, or regulation of any government or agency, official or instrumentality thereof. An architect must never subordinate the quality and adequacy of his services to any consideration which would tend to impugn the integrity of his professional practice or to jeopardize the professional standards which should at all times guide the practice of his profession.

For a vendor of any type of goods or services to
bid competitively, there must be a detailed specification of what the purchaser requires. At the outset of an architectural project, a detailed prospectus cannot be prepared to define the exact nature and scope of the services to be performed since professional services involve many intangibles such as technical knowledge, judgment, skill, and decision-making. The client and the selected architect define and delimit the scope of those services as part of their negotiations. The client may not know exactly what professional services he needs at the beginning; the architect may in fact advise him that he does not need certain services, depending on the architect’s organization, the type of project, the client’s own capabilities, and how much groundwork has already been done. Even if it were possible to do so, establishing a common base for competitive bidding would prevent the architect from providing a valuable professional service—that of helping the client determine precisely what services he really requires.

While the maxim that “you get what you pay for” is too simplistic to be a universal truth, architects base their compensation on the amount of work to be performed—in other words, the amount of professional and technical time which will be spent in the design development and construction of the project. A conscientious architect may spend many hours developing, weighing, and discarding possible design solutions in order to come up with the most workable and economical final designs.

If an architect were to submit a competitive bid and, in his desire to be retained for the project, did not provide adequate compensation for careful study and design, the time simply could not be spent. The resultant design solution would obviously not be as good or efficient as it should be to properly meet the client’s requirements. Similarly, the architect might not be able to spend all the time needed to research the most economical materials and systems for the project, which would probably cost more as a result. Thus a dollar saved on professional services could result in many additional dollars spent on construction—and this effect could be multiplied several times in increased maintenance costs over the useful life of the facility.

The success of a project is largely dependent on the architect’s experience, creativity, and skill—all attributes which are intangible and difficult to quantify on a competitive basis.

All this is not to say that architects are opposed to competition. On the contrary, they subscribe to it as a basic principle of American life. But they realize that to meet the needs of their clients, they must compete on the basis of ability to perform the required services. Once a firm has been selected on the basis of demonstrated qualifications to perform the work, it is a relatively simple task for the client to negotiate a fair fee.

**One final word on competitive bidding.** Public clients—those representing governments at various levels—are occasionally concerned that statutory requirements in their jurisdictions will require competitive bids to be taken for professional services, just as they are required for other types of procurement. In practice this is rarely a cause for concern. On nearly all occasions when courts have decided the question they have held that competitive bidding requirements are not appropriate and do not apply to procurement of professional services.

**Your best interest, as the client, should be paramount.** In selecting an architect, you will look for skill, experience, ability to perform on schedule and within a construction budget consistent with your needs—and above all, the same dedication to excellence the architect would apply if he himself were the owner of the project. In effect the architect becomes a partner in your organization, responsible for designing the facility that best meets your needs and objectives.

Following sound selection procedures can help make that process easier, and will produce a facility which will properly serve your best interests both initially and throughout many years of use.

Reprinted from an AIA pamphlet, copies of which are available from John P. Conron, FAIA, P. O. Box 935, Santa Fe, New Mexico 87501.

**Bibliography**

The American Institute of Architects has published documents which may be of further interest. These are available at the Institute, 1735 New York Avenue, N.W., Washington, D.C. 20006, or from offices of the local AIA chapters in each state and major city:

- Owner-Contractor Agreement Form—Stipulated Sum (A101)
- Short Form for Small Construction Contracts—Stipulated Sum (A107)
- Owner-Contractor Agreement Form—Cost plus Fee (A111)
- General Conditions of the Contract for Construction (A201)
- Contractor’s Qualification Statement (A305)
- Recommended Guide for Bidding Procedures and Contract Awards (A501)
- Guide for Supplementary Conditions (A511)
- Instructions to Bidders (A701)
- Owner-Architect Agreement—Percentage of Construction Cost (B131)
- Owner-Architect Agreement—Multiple of Direct Personnel Expense (B231)
- Owner-Architect Agreement—Fee plus Expenses (B331)
- Duties, Responsibilities, and Limitations of Authority of Full-Time Project Representative (B352)
- Standard Form of Questionnaire for the Selection of Architects for Education Facilities (B431)
- Statement of the Architect’s Services (B551)
- Code for Architectural Competitions (J331)
The New Mexico Society of Architects Announces Third Honor Awards Program

In order to recognize distinguished accomplishments in the architecture produced by its members, the New Mexico Society of Architects announces its third Honor Awards Program.

Awards will be given for commissions or projects which have been completed between January 1, 1970 and September 1, 1975. Eligible "commissions" or "projects" include three areas of architectural interest:

1) New buildings or structures, and the remodeling of existing buildings or structures;
2) Historic Preservation or Restoration;
3) Environmental Planning

Projects prepared by members of AIA, AIP or ASLA

The latter category includes all planning projects which were undertaken by residential New Mexico members of the American Institute of Planners, the American Society of Landscape Architects as well as members of the New Mexico Society of Architects and which were actually completed upon the submittal of a bound report and/or drawings.

No rules or restrictions are placed upon the method of entry presentation. It is completed architectural and planning projects which are solicited, not expensive and elaborate brochures or exhibition panels. Full-view binders are encouraged but large panels which have been prepared for other chapter or exhibition purposes are acceptable.

Color slides of completed structures are urged. Slides or photographs must show the complete structure and its relation to the environment. Slides or photographs of the interior should be included, along with site plan, floor plan and section as needed to explain the solution.

Remodeling and Historic Preservation entries must be accompanied by full "before" and "after" documentation.

Planning project entries must include one copy of the final bound report and any additional information to better explain the "planning" proposals.

The jury cannot be called upon to guess the intentions of the architects. Further, it must be stressed that no project is to be judged in competition with other entries. Rather, the jury is to evaluate each entry on its own merit.

NOTE: the designer will have to SELL the jury.

It must be understood that the New Mexico Society of Architects, the Awards Committee, nor the jury can be responsible for loss or damage to any entry. Therefore, each entrant is encouraged to insure his own entry material.

The judges will be instructed to make one level of award only—Honor Award.

While no limit is to be placed upon the number of Honor Awards to be given, it is outstanding and significant architecture, historic preservation, or planning concepts which is to be so honored. Further, the judges have the duty to make no award when, in their opinion, no project is worthy of this high honor.

Through this Honor Awards Program, the Society wishes to bring public attention to the vast scope of work, and the rich variety of results that are produced by the architectural profession of New Mexico.

While the completed structure or planning project need not be located in New Mexico, the execution of the commission must have been undertaken in New Mexico architectural or planning offices, and all entries must so stipulate.

All architectural and consultant credits must be placed in a sealed envelope and securely attached to each entry.

Deadline for receipt of entry submittals is October 1, 1975.

An entry fee of $10.00 must accompany each entry.

Send to any member of the Jury:
- J. Hill, Chairman
  Box 342
  Silver City, N. M. 88001
  388-1571
- Bill J. Shelton
  335 Jefferson, S.E.
  Albuquerque, N. M. 87108
  255-9090
- Robert Nestor
  133 Keehan St.
  Santa Fe, N. M. 87501
  988-2391

LETTER TO THE EDITOR

Dear Sir:

A friend of mine recently sent me a copy of your September-October '74 publication containing a story about the Ilfeld Warehouse in downtown Albuquerque.

The story is a fair account of the events which led up to the present status of this building with the exception that it left out the fact the Urban Development Agency was ultimately responsible for obtaining a "stay of execution" pending a final resolution of the building's fate. I do not mean in any way to make light of the role Mr. Munroe played in this drama; however, I do believe if Mr. Munroe understood all the facts the article would not have inferred the Agency was the "villain" of this episode.

In any event the compelling reason for this letter is the impression left by the article that the building has been "saved." The fact is the city is "considering" utilizing the building as a home for the Museum of Albuquerque; this decision is not final. The Urban Development Agency is interested in contacting potential developers of this facility for a "Ghirardelli Square" type development. We have recognized for some time the potential of this building for mixed uses ranging from offices to retail outlets and restaurants to public use. It is large enough to accommodate such uses and its rehabilitation appears to be feasible. However, the past difficulty, as the present, is one of attracting private capital. We have as of now...
not been contacted by a developer with financial ability to carry out such a development. We have attempted to solicit such developers and will continue to explore this possibility. I believe it extremely important, therefore, that the members of your profession, with their imagination and contacts with potential developers, not labor under the mistaken belief that the fate of the Ilfeld has been sealed. The Agency would appreciate your assistance in locating potential developers as an alternative in the event the museum is not placed in this building.

Sincerely,
James W. Anthony
Attorney at Law

As I recall, the "Agency," along with the Santa Fe Railway, wished to eliminate the Ilfeld Building.

NATIONAL TRUST'S FIRST BILINGUAL PUBLICATION EXAMINES CRITERIA FOR HISTORIC DISTRICTS

If buildings, like people, are to survive and have meaning, they must do so within the total context of a community, suggests HISTORIC DISTRICTS/LES DISTRICTS HISTORIQUES, the first bilingual publication of the National Trust for Historic Preservation. The 40-page illustrated book was published on behalf of the American Committee of the International Centre for Conservation in Rome, Italy, and was supported by a grant from the National Endowment for the Arts.

HISTORIC DISTRICTS / LES DISTRICTS HISTORIQUES presents in English and French two papers originally delivered at the International Centre in Rome. Included are "Aesthetic and Social Dimensions of Historic Districts," by William J. Murtagh, and, "A Policy for the Preservation of Historic Centers," by G. C. Argan. Dr. Murtagh is Keeper of the National Register of Historic Places, an office of the National Park Service, U.S. Department of the Interior. Dr. Argan, founder and director of the Italian periodical Storia dell'Arte, is a professor of the history of modern art at the University of Rome.

In his foreword to the edition, Paul N. Perrot, assistant secretary for Museum Programs of the Smithsonian Institution, suggests that this cooperative publication effort demonstrates, "that a commingling of desires and of means of expressing them is growing in different latitudes and longitudes and, though expressed in different languages, is aimed at fostering our oneness in the preservation of our common heritage."

Criteria Illustrated

Dr. Murtagh enumerates and discusses seven basic criteria for recognizing historic districts: integrity of location, design, setting, materials, workmanship, feeling and association.

He also points out that the United States has developed preservation priorities that are "diametrically opposed to the priority that developed in Europe." In writing about conservation areas or town centers, states Dr. Murtagh, "Europeans usually refer to the two basic criteria as, first, aesthetics and, second, association (or, architecture and history). In the United States . . . consideration traditionally has been given to historical association first, with artistic endeavors as a secondary consideration."

Speaking from the European viewpoint, Dr. Argan suggests that the "image of a historic city should not be preserved as a document in an archive but as a cultural valuable retaining reason and function." He also urges that historic areas be preserved with "the same scientific criteria applied to works of art."

Boston to Bergen,
Santa Fe to Siena


Organized in 1958 under the auspices of UNESCO, the International Centre is now an independent inter-governmental organization of 58 nations devoted to the preservation and restoration of historic property. United States participation in the Centre is coordinated by a committee of the Advisory Council on Historic Preservation whose chairmen are drawn from the Smithsonian, the National Park Service and the National Trust.

The National Trust is the only national, private organization chartered by Congress to encourage public participation in the preservation of architecturally and historically significant buildings and sites.

Copies of HISTORIC DISTRICTS/LES DISTRICTS HISTORIQUES may be ordered from:

Preservation Bookstore
The National Trust,
740 Jackson Place, N.W.,
Washington, D.C. 20006
$2.50 each plus 25 cents postage.
Coming in NMA:

A fully descriptive article prepared by The Architects, Taos, will be published in the May/June New Mexico Architecture—watch for it.

In concert with seven other architectural firms, The Architects, Taos have recently completed sub-contracts with AIA Research Corporation on Solar Energy and Housing. The work was done in support of the Solar Heating and Cooling Demonstration Act of 1974.

Portions of the studies are being included by AIA/RC in the preparation of a resource document for use by ERDA, HUD, other federal agencies, as well as by architects, builders and potential solar homeowners.

The purpose of the exercise was to illustrate how climatic parameters can influence the design of a solar heated dwelling when the solar subsystem is fully integrated into the design rather than retrofit as an add-on post-design operation. The results of the study indicate an interesting potential for an architectural regionalism based on climate.

Our specified topic was Single Family, with emphasis on semi-passive systems. In general, our prototypes make liberal use of low temperature thermal storage in large water tanks within the structures. After designing a prototypical housing unit for temperate climate with an integrated solar subsystem, we then documented the changes in design and subsystem required to adapt the dwelling for performance in colder and warmer climates. In an effort to call attention to the need for better graphic data on isolation, several maps were developed which separate the diffuse and direct solar components in the U.S.

In the course of meetings with various agencies involved with our work, we were alarmed to discover that the structure of solar legislation may, together with the administrative and staffing characteristics of ERDA, cause a premature federal focus on a retrofitting industry whose goal is to sell and maintain hardware, instead of conserving energy. Rather than innovate and integrate semi-passive solar subsystems into the design of buildings, there is strong pressure from NASA-related and other industries to approach the subject of solar energy for the masses within a stereotyped framework, using the same procedures as have customarily been employed in the design of fossil-powered heating systems. In the case of the 60 million dollar Solar Demonstration Act, the scenario may become a truly unfortunate sequence:

The bureaucrats will build “traditional” houses with a few energy conserving features, then the flat plate collectors will be fit between the roof joists, by a separate group of solar “specialists,” and with the help of a small computer-controlled black box, the job is done. The gadgetry will be sufficiently complex so as to deter do-it-yourself repairs, but your local utility will be happy to lease and maintain the equipment (and sustain their revenue for a nominal cost which may be close to the charge otherwise paid for oil or gas. Thus, we are forever charged for sunshine, and due to the complex mechanical and electrical interfacing of solar with traditional systems, the average solar energy homeowner will have no way of assessing the actual net energy he saves. Although the fossil powered “backup” system will work without solar assistance, the solar subsystem will be intentionally designed to require some critical input from the energy net as a mandatory precondition for its operation.

We feel that it is critical to sound a warning, because soon the process of “solar demonstrations” will begin, and the architectural profession will become involved.

The Architects, Taos

The prototypical 3 bedrooms, 2 bath residence developed for a temperate climate by The Architects, Taos incorporates an airlock entrance and rooftop skylights. Due to the requirement for adaptation to many parts of the country, indigenous New Mexican materials such as vigas and adobe were intentionally excluded from this prototypical model.
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There's been a lot of talk about possible shortages of natural gas for customers of Southern Union. Many of you have asked how serious the situation really is. Here are some straight answers to your questions.

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A. YES! Southern Union has made sure there will be an ample supply of natural gas for residential, commercial and other high-priority customers. A supply is available not only for this year, but for many years to come.

Q. How will Southern Union make sure there's an ample supply of natural gas?
A. To assure a dependable supply of gas for high-priority customers, it may be necessary to curtail service to large-volume, low-priority users during extreme cold weather.

Q. Will the cost of natural gas be going up?
A. Like all types of fuels, the cost of natural gas will be going up. Because, quite simply, it costs more to find and tap new sources of this precious fuel. And, the cost must be shared by us all. But, remember that natural gas will still be the most economical source of energy obtainable.

Q. How long must we be careful to conserve natural gas?
A. As long as the demand exceeds the supply, which is not likely to change in the foreseeable future.

We must all get used to the fact that natural gas, like other precious resources, must be conserved.

Because, this winter, and for many winters to come, natural gas will still be your most dependable and economical source of home energy.

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