Footnote for City Planners
(See Story on Page 47)

NORTHWEST ARCHITECT
SEPTEMBER-OCTOBER, 1953

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VOLUME XVII
NUMBER FIVE
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HERE IN
MINNEAPOLIS
U. S. A.—1953
SHOPPING DAYS
ONLY
137 PER YEAR!

SO DAYTON'S MOVES
OUT EIGHT MILES
TO SOUTHDALE—

WELL WHAT ABOUT
REAL ESTATE VALUES
IN 1973 FOR EVERYBODY
IN THE LOOP?
TWENTY YEARS IS A
VERY SHORT TIME

How can we improve our downtown business climate?
Rainy days-business as usual
Slushy days-business as usual
Sweltering heat-business as usual
Sub-zero cold-business as usual
NO WONDER
NO ARCHITECTURE

SIZE is always a key factor. Size is a relation, not a thing. All the many kinds of size, control the process by which man serves his business, and refresh his spirit.

A “WHY-IS-IT” FOR EVERYBODY
By William Gray Purcell

WHEN AN ARCHITECT designs a building to secure public applause by means of bigness, general amazement over the result soon fails, unless accompanied by other satisfactions.

When an architect allows himself to be pressed by the mechanics, economics, or the service convenience factors of a project, to the exclusion of the invisible power factors of Time, People and the seethe of Ideas, his building will also fail. Size organizes details to produce effective action. Size also becomes the voice of the building. Size is both the speech and the song of Architecture. Architects give it a name—"scale," meaning various kinds of related-ness. Size becomes poetry, whether large, or small, or merely as all the kinds of exactnesses.

Scale as the significant relation of size-values in architecture is no longer given much attention by architects; the word is not even in the dictionaries.

Scale is at least not defined as professional designers use the word.

This Article is addressed to people who use buildings and people who ask architects to build more buildings. It is the purpose of this writing to show just what size can do for a project—all the many kinds of size. We will then apply this idea to a much needed project for Minneapolis and St. Paul and thereby demonstrate that space is the greatest of luxuries and that size is more durable than the put-together materials which let you experience it.

I F YOU WILL LOOK again at the Editorial Page you agree that while the building shown does not at first appear so vast, the great arch is really a very large entrance to something. Actually taken together with the side arches we have here the entrance to an indoor street—indeed to two streets—each a thousand feet long. A right angle intersection at their centers forms at that point an octagonal plaza covered with a lofty glass dome.

But look again at the size idea, for it is the key to this “building” the whole of which is actually only two covered streets lined both sides with business shops and offices. Look at the walking man beside the left column base; let your eye move up, up to the high arch; this really is a door! Or take a card, mark the length of that 6'-0" man and use it to measure this door. It is 100 feet high! The "small" side arches are 42' high, the awnings 30'. These are generous pro-

NEW YEAR’S DAY
MINNEAPOLIS JAN. 1, 1973

THAT'S RIGHT—19 "Seventy" 3 and thirty feet above the corner of 7th Street and 3rd Avenue South. This is your Centergreen Street cleared for this evening's "outdoor" festival (at 70°—with summer air) and, just at the moment, awaiting the placing of seats, palms and flowers; while down beneath this "floor" the muffled Monday morning traffic drones through two feet of snow, ten-below-zero and a biting wind.
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The building is monumental, not utilitarian, and yet it portions. The dimensions are the measure of a city. It houses more than a hundred places of business and double that number of business and professional offices, gives to customers shelter from intolerable sun and inconvenient rain.

The “interior”—the undercover thoroughfare—of this seventy-five-year-old building is shown above and the similar Arcade, Gallerie Umberto Primo is shown on the cover. The indoor pedestrian streets of both are 40' wide and the glass dome over the inner crossing-plaza, of the one in Milan rises to 160'.

This Galerie Vittorio Emanuele in Milan cost $1,000,000 (as of 1940)—is the largest structure of its type in Europe. The one of smaller area in Naples cost $250,000. Both would cost ten times that today. They were built in 1870.

**DID YOU KNOW** that there are only 137 “shopping days” in a Minneapolis year? Subtract 65 Sundays and holidays from 365 and more than half of the remaining days of the year are too unpleasant to coax buyers out. Add to that the traffic hazards. Is it any wonder that Dayton’s are moving to the country? “Dayton’s are moving?”—this is only the beginning.

**WILL THE PROPERTY OWNERS** of downtown Minneapolis sit quietly by and watch their property values fade away? It has happened before; it can happen to you and soon. Dayton’s new sales center at Southdale solves only one half of their problem. They too still have a very large plant downtown. It must sell no less a volume of goods as in the past to survive. There is a large population who still live North and East of the “loop” who find it as difficult to get downtown to buy as do the people in Kenwood. They too will be served, and by whom.

But gentlemen—businessmen of Minneapolis—you just can’t afford to drift along. The able planning given your businesses will be wrecked without adequate public planning of the economic geography where you will be obliged to operate. Dayton’s Southdale is no answer to the now obsolete civic mechanism which is now the heart of the Minneapolis business district. Naples and Milan have a very good reputation for year around climate and they have more like 337 shopping days than 137. If in 1860 these Italian corporate cities felt the need of maximum comfort for the buyer, can Minneapolis and St. Paul in the advertising and selling era do less?

**THAT IS THE NEED, and those the conditions. But the always changing Minneapolis must continue to grow out of the living city of today. So we must ask ourselves what kind of projects can be developed that will pay their own way. 1853—1953—2053—can you see it—the new city of the future? Not much like the way you live and work today. Your children will see our new Minneapolis not so far over their Hill of Time.**

WE PROPOSE to glass-enclose a really vast space of now unused atmosphere in the heart of the business district, so planned as to demonstrate what can be done, how to do it, and even more important, what to do next. Such a project would hold hope for the future because the problems of a great city become daily harder to solve. To secure public consent calls for costly education. Private cooperation naturally will not move without protection of invested stake. There are many things that can and should be done and done quickly if reality values are to be maintained. Facilitating local traffic of all sorts within the loop is one of them. It’s solution by our proposed Centergreen Gallery for a climate as hot and as cold as the Twin Cities, presents some interesting possibilities in business and civic cooperation.

You have caught the general drift of our plan from the fine pictures of the Italian “Galleries,” a better word than ours for this delightful European development of the ancient oriental streets of Cairo or Bagdad, with their reed sun awnings and open shops. We have built nothing approaching this convenience, which in both Europe and America are called “Arcades,” now a poor word and depressing for us, because all failed. They were too small, too tight, and no wonder. And too, the practical and emotional need for space, for comfort went unmet. As civic advertising they were not even good “reason-why” publicity.

Minneapolis has a history of “arcades” of a sort. In the 1870’s there were a number of small roofed walks and sales areas. Powers store began with such an idea, as the ambitious multi-storied arch on Nicollet Avenue and the high ceiling foyer immediately behind it still attest. This arch filled in with glass is only one-third the height of the Umberto Primo great doorway. During the building of Powers Arcade weather and space demands got the better of a too timid idealism. The idea of a doorway to adventure-in-shopping tangled with the gadgetry of “window” and lost the meaning of both. In later years at Sixth and Hennepin and in the Baker diagonal other experiments were tried.

IN THIS MATTER the conservation of business customers, retail purchasing must be simplified. More and better parking and day-storage is no cure; only makes matters progressively worse and finally impossible.

THOSE WHO ARE NOW obliged to make longer and longer walks, from increasingly expensive parking agencies, in rain storm and blizzard will soon change, are already changing, their business locations and will seek suburban amusements. Of course the gradual but eventual separation of wheel and walking traffic is only one factor in a readjustment which is going to mean a wholly new kind of business action in the center zones of all cities. Desirable as is Dayton’s farsighted Southdale Sales City with built-in customers, the thing that is really pressing Minneapolis now is its congested area, “the loop,” where too many people must, of hard necessity, continue to serve themselves and their

(Continued on Page 44)
66,000 Feet of 3rd Grade Maple Flooring Goes into Twin City Warehouse


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"FIREPROOF"

a Misnomer

By CHARLES M. GRAY
Manager Insulation Board Institute

It's high time we clearly understand what is meant by "fireproof buildings" and individual materials that supposedly "fireproof" them.

"Fireproof" is one of the most misused words in our vocabulary. Actually, there is no such thing as a "fireproof building" although it can be reasonably fire-safe and such safety involves many factors besides the combustibility of the materials used in its construction. Almost any building material will burn or collapse when exposed to enough heat. Few can withstand temperatures of 1500 degrees Fahrenheit or better—the temperatures reached at the center of substantial construction fires.

"Fireproof" is a term customarily used to mean that steel or other structural supports of a building are protected against collapse for a given period of time when exposed to intense heat. It doesn't mean these intense heats will not be reached in the building referred to as "fireproof" and continue past the time element for which the structural members have been protected. Nor does "fireproof" have any significant meaning in connection with human lives that may be within the structure.

Instead of relying heavily on the "fireproof" characteristics of individual products, it's time we started looking at the over-all reasons for the tragic loss of lives in fires. And, with an understanding of reasons, let's promote the preventative means within our power—such as compliance with our modern building codes and some basic design rules for fire-safe construction insofar as human lives are concerned.

Had you been in Chicago in the LaSalle Hotel that night in June, 1946, you might have been comforted in knowing that the structural framework supporting the building would not collapse even with a total burn-out of the combustible furnishings and materials within the building. That's how much "fireproofing" had been added to these columns, beams, girders and other structural members. But you would have seen 61 people lose their lives.

Had you been in St. Anthony Hospital in Effingham, Illinois, that night in 1949 you might have taken solace in the fact that many highly fire-resistant building materials were used there, too. But you would have seen 75 people lose their lives. Later, after an investigation was concluded, it was found that combustible building materials, while contributing fuel to the fire, were not as much a factor in the resultant loss of lives as the un-divided floor areas, the open stairway and elevator shafts, the unprotected clothes chute enclosures, unobstructed corridors where the flames could spread and the lack of fire-fighting equipment and fire drills.

Yes, there's far more to a fire-safe building than fire-proof building materials. When the Disaster Committee of the Building Officials Conference of America reported on the St. Anthony fire, members said, "Some factors not of major importance in a building properly constructed to prevent the spread of fire, but which may have contributed fuel to the fire, include excessive use of wood trim, shelving, temporary combustible partitions, multiple thicknesses of paint coats and freshly painted surfaces and combustible wall and ceiling finish materials."

The 13 member companies of the Insulation Board Institute spent years of research at the Forest Products Laboratory in Madison, Wisconsin, in developing a flame-resistant coating for interior finish insulation board products, culminating in a flame-resistant surfaced in-

*Editor's note—Several issues ago we published an article on "fireproof construction" which aroused considerable comment. Inasmuch as the story presented one aspect of the vital problem and some of our readers felt other aspects should also be covered we are pleased here to present further material information on this problem. The author, Mr. Gray, AIA member of the St. Louis Chapter, is widely experienced in the construction field and has special qualifications in the field of building codes and fire prevention. In future issues, when additional information becomes available, we hope to present still further developments in this situation of such importance to our readers.*

(Continued on Page 37)
Designed by Elizabeth & Winston Close, Minneapolis Architects.

Residence at 6th Avenue North Road, Long Lake, Wayzata.

Designed for a family with four children with accommodations for servants quarters.

Flexible use of playroom, laundry and kitchen. Supervision of play-yard from kitchen. Two sets of bedrooms . . . each one-half flight from living area.
Music Building Incorporates Deftly Sympathetic Planning

"Music is informal and that's the feeling we attempted to get into this building. We gave equal consideration to the exterior, striving for musical rhythm."

These objectives stated by O. J. Ballas of Fox & Ballas, AIA, Missoula, Mont., have been brilliantly realized in the new School of Music of the University of Montana in Missoula. The beautiful two-story and basement building with its arresting façade and shape has become the show place of the campus. Started in March, 1952, the structure was completed July 1 of this year at a cost of only $672,493. Total floor area is 41,010 square feet and volume of the building 684,330 cubic feet.

The main elevation faces west. From the air the curving south end looks like a concert grand piano but this was primarily accidental.

"The plan was dictated by the size of the rooms required," Mr. Ballas explained. "We had to incorporate a recital hall to seat about 400, a bandroom to accommodate from 80 to 100 and a choral room for from 80 to 100. Classrooms had to be flexible enough to take care of 15 to 40. Small practice rooms, studios and offices were necessary. We also provided a coffee room where staff and students can meet informally, a reception lounge and a library. So there were all these different sized rooms that didn't lend themselves at all to the typical classroom building of uniform width and a central corridor."

Exterior walls are brick with a backup of lightweight concrete block. The walls are straight but flare outward on the exterior. All practice rooms and studios have non-parallel walls to eliminate flutter echoes. On the second floor the ceilings slope about 10° from each side, leveling out over corridors.

The front façade is glass block behind limestone louvers placed at a 45° angle. A continuous vision strip of double insulating glass, 40 inches high, is set in
Modern Beauty
in Bathroom Fixtures

Case Nos. 1000 and 1010 One-Piece Water Closets—1/4" sheet covered seat, supply pipe, special stop in tank. Non overflow quiet, powerful centrifugal flushing action. Round front or elongated bowls with or without open front seat and cover.

The Willard No. 850—meets growing demand for a dry shelf vitreous china lavatory. Chrome plated supply and pop-up waste fittings, concealed front overflow, soap depression and anti-splash rim, either 22x18 or 24x20.

No. 1200 Deluxe Water Saver Closet Combination—centrifugal action, large water area. Vitreous china tank bolts directly to bowl—not attached to wall. Round front or elongated bowl.

No. 1325 Camel Water Closet Combination—special reverse trap bowl, with jet and extended rear shelf. Vitreous china tank, bolts directly to bowl. Available in 10, 12 or 14" rough-ins.

Whitney No. 960—latest in tile-in or built-in vitreous china lavatory. Illustrated with Hudee stainless steel rim. Chrome plated supply and pop-up waste fitting—22x18". Round overflow, anti-splash rim, square basin, dual soap depresions.

No. 950 The Whitney—latest in tile-in or built-in vitreous china lavatory. Illustrated with Hudee stainless steel rim. Chrome plated supply and pop-up waste fitting—24x20". Square basin, front overflow, anti-splash rim, soap depression.

Rogers-Hamilton Company
Wholesale Distributors—Plumbing, Heating and Kitchen Supplies
Park Avenue and Third St.
Minneapolis 15, Minnesota

ARCHITECT
aluminum sash 3 feet 6 inches from the floor. Class­
rooms are located on this side of the building. Studio
offices on the rear side have picture windows. All glass
is stationary for the structure is completely air-condi­
tioned.

Bold color and interesting texture combinations were
used throughout the interior. The main entrance lobby
and stairway ceilings are a deep, moss green shade
of vermiculite acoustical plastic, the stippled finish con­
trasting with polished rich brown mahogany paneling.

This acoustical job is unusual because integral color
pigment was added in the wet material, eliminating
the need for spray painting and assuring the exact hue
desired. As every architect knows from experience, the
problem in working with a wet mix of colored plaster is
to proportion the pigment so the final result will
meet specifications instead of drying out to some off­
shade. Meticulous research by Fox & Ballas guaranteed
true colors throughout. Small sample panels were made
up and dried with the acoustical plastic and pigment
for each being accurately measured, weighed and
recorded. When these data were translated into full
scale batches, the plastering contractor had no difficulty.
Powdered pigment designed for coloring cement and
concrete work was used.

Ceilings in basement rooms, lavatories and the library
are white vermiculite acoustical. On stairways the metal
lath was furred out ¼ inch from the concrete for more
effective acoustical control. Fire protection for the stair­
wells was secured in addition.

In the recital hall, walls of light and dark plywood
paneling of various sizes and different resonant frequen­
cies contrast with a gold grid at the back of the stage
and bright turquoise mohair seat cushions. Organ pipes
are concealed behind the grid and there are special louvers for organ effects. The floor of the stage is
maple. In the audience section the aisles are cork
and in the seating areas are asphalt tile.

Designed strictly as a recital hall for student perform­
ances, this stage is probably unique. The entire focus
of interest is on the stage itself, which is large enough
to accommodate the full university symphony orchestra.
Folding doors, 6 feet wide and 7 feet high, make it
possible to move grand pianos in and out quickly and
double exterior doors at the back facilitate bringing
them into the building. A freight elevator from the
basement to the third floor was also provided for mov­
ing heavy equipment.

Chairs in the recital hall are equipped with folding
tablet sidearms so the hall can double as a lecture room.
Across the corridor at the north end are a theatrical
green room and a large storage area. Overlooking the
stage is a small broadcasting room connected by direct
telephone service with a downtown studio.

Colors in the semi-circular choral room on the second
floor are salmon pink and gray. Even the practice rooms
have attractive color combinations to create a stimulat­
ing atmosphere. A typical bay consists of three prac­
tice rooms and three studios. The north wing can be
expanded as more such rooms are needed. All doors
to the practice rooms are double, with cork boards for
scheduling practice hours provided on doors opening
from corridors.

The tastefully furnished reception lounge and the
coffee room are at the head of the stairs on the second
floor. Other facilities include organ practice rooms,
lockers in the basement for storing uniforms and band
instruments and rear stairways so performers are not
obliged to use main corridors. One of the large class­
rooms on the main floor has a folding partition to
give this space greater flexibility.

There are three separate heating plants for the build­
ing. The system is split, with one duct carrying heated
air, the other, outside air. Each room is individually
supplied with both warm and cool air.

Fox & Ballas have been practicing in Missoula since
1943. William J. Fox is a graduate of the University
of Washington and Oscar J. Ballas of Montana State
College. Mr. Ballas is president of the Montana
Chapter of the A.I.A. this year.

The design of the recital hall is seen here—
acoustically the best possible and full of dramatic
possibilities for any kind of musical presentation.

A.I.A. MEETS WITH I.E.S.

Twin City A.I.A. were invited to meet with the
Illuminating Engineering Society at its meeting held
on Tuesday evening, October 27, in the Calhoun Beach
Club, Minneapolis. Refreshments and dinner at 6:00
p.m. were followed by a meeting during which the
guest speaker was Grover Riddle, resident architect at
General Electric's Nela Park.

The Twin City Section of I.E.S. is again sponsoring
a prize problem for architectural students at the Uni­
versity of Minnesota with prizes totaling $100. This is
the fifth year this prize has been offered. Prizes are
awarded on the basis of originality and appropriateness
in incorporating illumination into architectural designs.
In subsequent problems ingenious solutions have been
submitted which indicate that students have a very
advanced appreciation of the role of light in architec­
ture. The problem this year will be presented under
the supervision of Carl Graffunder, staff member of the
School of Architecture.
Concrete Frames and Floors

... QUALITY CONSTRUCTION FOR MODERN APARTMENT HOUSES

These buildings show the widely growing use of reinforced concrete frame and floor construction for apartments. There are many reasons for the increasing popularity of this type of construction. It offers durability, great strength, firesafety and economy. Cost analyses and competitive bids over the country show it saves up to 40% on frame and floor cost. Its moderate first cost, small maintenance and long life add up to **low annual cost**, which pleases owners and investors.

For help in designing and building reinforced concrete frame and floor apartment buildings write for your copy of free, illustrated literature. Distributed only in the U.S. and Canada.

**PORTLAND CEMENT ASSOCIATION**

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A national organization to improve and extend the uses of portland cement and concrete through scientific research and engineering field work
A Children’s Museum

for Minneapolis

By PAUL CHIKAMORI

An undergraduate thesis submitted to the School of Architecture, University of Minnesota as part of the graduation requirements, 1953.

Why a Children’s Museum

NEED: By far the greatest number of museums are for adults. In the United States there are approximately ten children’s museums housed in separate buildings. These are located in Boston, Brooklyn, Cambridge, Detroit, Duluth, Fort Worth, Hartford, Indianapolis, Nashville and San Francisco. With the recent emphasis of youth as the backbone of the nation there is no need to explain that it can be the life-blood of museums. The opportunities that can be offered to young people are immense and staffs of museums are well aware of this fact but the element that is overlooked is the contributions that youth itself can donate.

Not only because of the scarcity of children’s museums, but to adequately accommodate the late processes of thinking towards youth and museums, there is a definite desire of such a building. In Minneapolis both the Walker Art Gallery and the Institute of Arts realize the inherent possibilities of serving the city’s youth but no environment that can be called a children’s museum has yet been developed.

PURPOSE: It would be futile and unjustifiable to design a museum that overlaps the activities of schools, libraries, playgrounds and churches. It is the purpose of this project that a distinct institution be formed that will supplement established organizations. The museum will be a flexible unit providing the child with the environment and necessary tools that will enable him to explore for himself the world he lives in.

Since activities mold character and develop skill, it will be the intention of this design to coordinate activities with the exhibits. To produce and create with his hands is an inordinate desire of every child. Mrs. Anna Billings Gallup, former director of the Brooklyn Children’s Museum, said, “... a place where education is recreation and recreation is education ... and that it provides a chance for the spirit to roam and the imagination to play.”

Why Should a Children’s Museum Be Housed in a Separate Building?

SCHOOLS AND MUSEUMS: Just as we have elementary schools, secondary schools and universities, it would not be impractical to say that an age division...
Every day, Vercoustic is being specified for more and more building and remodeling jobs. This vermiculite plastic sound-quieting material has proved itself to give greater sound absorption for less money... to add a restful attractiveness to any room.

Vercoustic, with a noise-reduction coefficient of .65, is ideal for reducing disturbing noises in schools, hospitals, libraries, offices and other business places... is equally effective for improving the acoustics in theaters, auditoriums and churches.

Easy to apply, Vercoustic requires only the addition of water for use. It has a plaster-like appearance, can be spray-painted without impairing its sound absorption ability. Write today for complete information.
is justifiable in museums. Museums are institutions of learning that are cor-relatives of the school systems. Robert Sayles, trustee and treasurer of the Children's Museum of Boston, says, "After all why try to mix ages? We don't do it in other forms of education. Would you expect children in the grades to have free access to the college halls, the boy collecting minerals free to go to the college professor to ask for help in identification? Then why not grade our museums at least to the point of having those for children as well as adults?"

Clubs, meeting rooms and exhibit areas in buildings formerly used for other purposes are springing up for young people almost overnight. They call themselves
...and See the
DIFFERENCE IN
classroom wardrobes

The first difference you’ll notice about an EMCO is there is no obstruction in the recess to trip a child. The recess is designed to permit easy access to shelves and hooks and there is ample clearance below the doors and around the wraps for better ventilation of garments. You’ll find the EMCO multiple operated receding doors move quietly—almost effortlessly and the hardware is adjustable so that the doors can be kept in alignment for the life of the school. No other classroom wardrobe matches all these EMCO quality points—yet EMCO costs no more than other good wardrobes.

EMCO offers a complete line of classroom wardrobes—both receding and center pivoted type doors—multiple operated or individually operated. You are invited to write for complete specifications and location of the nearest EMCO installation if you wish to inspect an installation personally.
children's museums but many of them close soon after coming into existence, primarily because of the lack of support from their communities and because they were founded without proper knowledge of what a children's museum is. However, those with sound principles are reaping rich profits for the youngsters are finding uses for them in many ways. More museums for the youths of our country should be founded.

FINANCE: Undoubtedly one of the major factors opposing the erection of museums is the financing of them. Most museums have trust funds, drives and donations for monetary support. Dues from memberships are also common. Seldom do individual states allocate money towards museums but some communities do support them. The community should undertake this responsibility for the education of children via the museum is without question a facile method, besides being enjoyable. If the city cannot possibly afford an individual unit, it should set aside a unit in an adult museum or take other covering.

ADULT MUSEUMS: While large, massive halls may inspire adults, they only tend to bewilder and frighten children and create a barrier to an informal atmosphere. Children's divisions in adult museums have a splendid purpose in mind but the environs are usually ill-fitted for children. In times of stress some people venture to say that children's areas are the first to be cut. This is true to a degree but not always. If, however, there were a separate building there would be no such problem.

LIMITATION OF AGE GROUP: The most desirable situation would be a separate museum for each age group. As a hypothetical problem, therefore, the museum developed in this thesis will be for children of the grade school level. In Minneapolis the population of children from five to fourteen years of age is 62,775 from the latest census.

SITE: The best museum location is not at the busiest intersection but at a point of less flurry on one of the main arteries that great numbers of people follow in going to and from their homes and that children can reach from their schools by means of public transportation.

Space Requirements

TABLES USED: In using Lawrence Vail Coleman's tables as a basis for space requirements we should take into consideration that they were compiled from figures obtained from adult museums. There can be no law established that determines what size a museum ought to be. These tables are used just as a basis. Furthermore, the philosophy of what museums should be has changed and no two museums are alike in any sense. The locale, personalities involved and the nature of the museum have varied effects upon space requirements.

STORAGE: Interviewing various museum people, I have arrived at the conclusion that storage space is of prime importance. Mr. Davies, director of the Minneapolis Institute of Arts, suggested that 50 per cent of the total floor area for storage might not be too much. Since most museums do operate inefficiently, a slight adjustment of the percentages used in the tables might be profitable.

DISTRIBUTION OF SPACE: Distribution of space among principal museum functions varies with the character, cost and size of the total building. In a new building there should be at least as much space for curatorial, administrative and service purposes as there is for exhibition. "Some people would give as ideal an equal three-way division among exhibition, curatorial and administrative. Collections grow as the museum becomes more established and one of the commonest mistakes is to allot storage area in the basement, thereby crippling the growth of the museum. In designing it is essential that storage areas can be expanded as well as exhibit areas."

(Continued on Page 20)
They called for power at Watertown, S. Dak.

Power is on the march.

Helping to meet growing electric power requirements in the Watertown area is a Bros multi-drum Watertube Boiler and Travl-Spred Stoker. Installed at Watertown's Municipal Utilities Department, this equipment was designed for a pressure of 475 psig. It has a generating capacity of 75,000 lbs. of steam per hour. Final steam temperature is 750 degrees F.

This design handily meets both heating and electrical power generating requirements with extra power to spare. Important, too, is the “single responsibility” of this installation... all essential components were designed and built by Bros for ease of erection and unified operation benefits.

SPECIAL FEATURES: Superheater maintains relatively uniform temperatures at fluctuating loads. Economizer lowers heat loss to stack. Waterwalls lower furnace temperatures, reducing slagging of low fusion ash. Furnace refractories last longer, too. Here’s top steam generating efficiency and economy!

...and BROS did the job!

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ARCHITECT
SUGGESTIONS AS TO SIZE (from "Museum Buildings" by Lawrence Coleman):

<table>
<thead>
<tr>
<th>Population</th>
<th>Total floor space (sq. ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>7,000 - 14,000</td>
</tr>
<tr>
<td>25,000</td>
<td>12,000 - 24,000</td>
</tr>
<tr>
<td>50,000</td>
<td>19,000 - 38,000</td>
</tr>
<tr>
<td>100,000</td>
<td>29,000 - 59,000</td>
</tr>
<tr>
<td>250,000</td>
<td>52,000 - 105,000</td>
</tr>
<tr>
<td>500,000</td>
<td>82,000 - 163,000</td>
</tr>
<tr>
<td>1,000,000</td>
<td>127,000 - 254,000</td>
</tr>
</tbody>
</table>

AVERAGE FLOOR AREA DISTRIBUTION FROM VARIOUS MUSEUMS:

- Exhibits: 35%
- Lecture-classes: 25%
- Offices: 6%
- Corridors, stairs: 10%
- Storage: 10%
- Shops-plants: 8%
- Miscellaneous: 6%

OUTLINE OF SPACE DIVISIONS:

- Activity rooms (3)—800 square feet each
- Meeting rooms (3)—500 square feet each
- Assembly room for 100—1,100 square feet
- Exhibit space—9,000 square feet
- Library—1,000 square feet
- Administrative offices
- Lobby—1,500 square feet
- Storage—6,000 square feet
- Curatorial—2,400 square feet
- Play areas
- Services

THE ACTIVITY ROOMS: Art Studio, Science Lab and Crafts Shop—800 square feet each.

Space allowances per child vary according to his age, that is, his work and leisure time needs. Wet play, block building and such activities may occupy the youngest groups while sculpture and painting take up the time of older children. The author of "Schools For The Very Young" finds that in playrooms for schools 40 to 50 square feet per child is not excessive. If a room is too large, however, the child may be overawed and confused. Forty feet per child seems like a reasonable figure to use and using 20 children as a group for one instructor (recommendation of Mr. Forsythe, department head, children's division of the Institute of Arts) 800 square feet is obtained.

The art studio's 800 square feet will provide space for sinks, storage for easels and paints, brushes, frames and canvas.

The science lab's 800 square feet will care for lab tables and benches, sinks and storage cabinets.

The craft shop's 800 square feet will give storage for clay, wood, leather and metal, storage for tools, sinks and a kiln.

MEETING OR CLUB ROOMS: It is decided that three small rooms for meetings and visual aids should be provided. Group projects, club meetings, discussions and slide showings would be the main functions of these rooms. Mr. Davies of the Minneapolis Art Institute believes these spaces are inexpendable. They will be of 500 square feet each and have space for storage of chairs and visual aid equipment, maps, charts and club records.

ASSEMBLY ROOM: For group gatherings, demonstrations, movies and dramas that the children stage; to seat 100 persons; to contain 1,100 square feet.

EXHIBIT SPACE: This unit should be as mobile as possible. Movable partitions, portable wall cases, tracks for lowering or raising ceiling heights, cubical, tetrahedral or spherical display units instead of shelves, and colors should aid in producing a flexible space. Changing exhibits are the trend in modern museums; therefore, a changeable display space must be provided (of 9,000 square feet).

LIBRARY: A small library used primarily for research should be incorporated, of 1,000 square feet.

ADMINISTRATIVE: The staff includes a director, a secretary, curator (receives, prepares, stores and delivers exhibits), superintendent (general supervision of building), receptionist, head of education staff, three full-time educators and custodial employees.

The office for director and secretary will be 200 square feet. A large office with a section for the education head and three desks for the educators will occupy

(Continued on Page 49)
A NEW TYPE OF LIGHTING FOR SCHOOLS AND OFFICES THAT NOT ONLY PROVIDES COMFORTABLE ILLUMINATION FROM WELL SHIELDED LOW BRIGHTNESS SLIMLINE LAMPS, BUT ALSO SUPPLIES ACOUSTICAL BENEFITS. MAINTENANCE IS SIMPLIFIED AND LAMP DEPRECIATION IS MINIMIZED.

Information compiled by Lighting Service Section

NORTHERN STATES POWER COMPANY

For factual lighting information, technical data on light sources, fixtures, relative costs, etc.

Call Lighting Section—MA 6251
Minneapolis P. C. Tackles Par

On a rain-threatened day recently members of the Minneapolis Chapter of the Producers' Council braved the weather for a shot at Old Man Par over the Minnesota Valley Golf Course, with dinner and fun in the evening for those who did not play to join those who did. Our pictures show who was there, in each case identification being from left to right in the pictures, starting at top and dropping on down.

First foursome in recorded its scores—Ben Meltzer of Ochs Brick and Tile, Vern Larson of Kimble Glass, Phil Taylor of Fiberglas and Larry Reak of Natco.

The weather was turning dull when another foursome made it to the last green—B. J. Mulcahy, Jr., of Halsey Taylor Co., R. G. Bush of Westinghouse Electric Corporation, C. W. Fogelberg of Reynolds Metals and A. J. Fischer of Overly Mfg. Co.

Soup'd in and dark were the conditions when the last foursome, a mixed group, arrived to be photographed—Mrs. W. H. Rabe, Mrs. C. A. Hustad, C. A. Hustad of Hustad Co., and W. H. Rabe of Ceco Steel. Following which the groups gathered in the clubhouse.

In the clubhouse bingo held the interest and in our circle group, starting with the lady in the foreground, go to the table at her left and around it clockwise—Mrs. Bob Olson, Mrs. R. B. Child, Mrs. Ray Bush, Mrs. A. J. Fischer, Mrs. B. F. Meltzer, Mrs. Vern Larson, Mrs. A. C. Longtin, Mrs. C. W. Fogelberg, Mrs. B. J. Mulcahy, Jr., and Mrs. B. J. Mulcahy.


More players—Mrs. Ivan Spurlock and Ivan Spurlock of Fiberglas, Phil Taylor and Mrs. Taylor, Mrs. Kermit Johnson.

GEORGE RAFFERTY TOPS ST. PAUL GOLFERS

George Rafferty, member of the staff of Architect Brooks Gavin, St. Paul, took top golf honors and won

the "Northwest Architect Trophy" during the recently bitterly battled A.I.A.-Producers Council golferoo over Keller Golf Course. His net of 71 was lowest in the field. Here George is shown with his trophy and the winner's smile. The tournament is an annual event.
"We Saved $5,000 with STRAN-STEEL!"

"We compared several different materials for framing this school. Because of its easier adaptation to the structural problems, Stran-Steel was $5,000 lower in cost than any of the others."

H. B. CROMMETT, Architect
St. Paul, Minn.

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Fillmore 2786

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Crawford MARVEL-LIFT Doors

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LAST EVEN LONGER

GENERAL SPECIFICATIONS
Upward acting doors shall be Crawford Marvel-Lift Doors, as manufactured by the Crawford Door Company, 401 St. Jean Avenue, Detroit 14, Michigan, and of the size and design as shown on the plans.

WOOD:
Wood sections shall have stiles and rails of vertical grain Douglas Fir, hardwood dowelled and steel pinned, waterproofed glued. Rails to extend full width of door. Panels to be of three (3) ply laminated fir 3/8" exterior plywood manufactured by the hot plate process with phenolic resin glue.

HARDWARE
Hardware shall include safety torsion springs on a continuous shaft across full width of door, rustproofed aircraft type cable (chain not permitted), rollers having a minimum of ten (10) ball bearings 1/4" diameter with both inner and outer races of hardened steel (use of roller shaft as inner race will not be permitted), bottom corner brackets mortised under bottom of door and of sufficient height to be secured across both rail and stile. Doors over 12'6" wide shall be additionally reinforced with suitable horizontal trusses to prevent sagging when open. Doors over 16'0" wide shall have suitable support to prevent sagging when closed.

GUARANTEE:
Doors shall be guaranteed against faulty or defective material or workmanship under normal operation for a period of one (1) year.

PRODUCERS’ COUNCIL ANNOUNCES CHRISTMAS PARTY DATE

December 8 is the date for the annual Christmas Party sponsored by the Producers’ Council for the A.I.A. of the Twin Cities. The scene will be in the Arizona Room in the Prom Ballroom on University Avenue in St. Paul and members of A.I.A. will receive personal invitations for the occasion prior to the event.

INSULATION ENGINEERS USE OWN POWER ON INSULATION WORK

Use of power takeoffs on their trucks and generators to supply power for lights and work being done on insulation of buildings is a feature of service unique with Insulation Engineers, Inc., Minneapolis. When work being done is in dark areas like attics the power from the trucks allows for absolutely sure sight and therefore complete jobs.

Insulation work, using Palco Wool, is only one of the activities of Insulation Engineers. They are contractors and distributors handling Reynolds Aluminum insulation products, the Morrison Roly Garage Door, mineral wool batts of American Rock Wool Co., Corinco Corkboard for home and industrial installations, Butcher Boy Refrigerator Doors, Rusco Prime Windows and other products.

Marvin L. Fergestad, president of the company, is a registered architectural engineer and heads a staff made up of Jay Bass, Ed Miller, Ray Cox and Eugene Peterson.

ATOMIC COBALT 60 USED TO TEST STEEL WELDS

A Detroit firm has discovered a new use for atomic energy in connection with the building industry! Huge steel beams of a building were x-rayed on the University of Illinois campus recently with an amount of radio active cobalt so tiny that it was hardly visible to the naked eye. E. L. Stouffer, the University of Illinois supervising architect, explained the X-rays were necessary to determine the safety of a 60-foot square underground room that will accommodate about 260 persons who would be endangered if any of the welds in the fabricated steel beams were defective.

To make such X-rays usually involves heavy equipment which is not portable; therefore Professor George L. Clark of the university’s chemistry department suggested use of Cobalt 60, one of the products derived from atomic activity at Oak Ridge, Tenn.

Prof. Clark for some time has been trying to do “missionary work” to demonstrate that Cobalt 60 offers a simple means of “making sure” on any steel construction, whether it be a bridge or a building. He contacted an X-ray company which sent a crew of technicians to the university with an amount of Cobalt 60 weighing less than a gram, but so radio-active that it was carried in two lead containers weighing more than 300 pounds. When the actual x-raying was done there was no heavy,
complicated equipment which is usually necessary to take an X-ray. Instead, just a small capsule of Cobalt 60 was clamped on top of a 1½-inch steel beam and X-ray film stuck on the underside of the beam with adhesive tape.

Only other equipment was a Geiger counter, which clicked away with warnings of radio-activity. When the film was developed a large cavity was discovered in one of the welded joints of a beam that was to eventually bear the main stress of the building. This weak weld could have led to the possible collapse of the entire structure.

NEW FILM AVAILABLE FOR BUSINESS GROUPS

Lee Rogers, president of Layne-Minnesota Company, Minneapolis, is making a new 22-minute sound movie color film available to business groups free of charge. This new film, entitled “Deep Water,” is the story of development methods devised by Layne in producing water from the underground strata, including on-the-spot shots of men and equipment actually working on locations.

The chief obstacle to getting an education in this day and age is finding a place to park.

A good thing to lay up for a rainy day is a reputation.
Lovering Construction Company speeds Large Midway Terminal Warehouse with PACAL STEEL

"Pacal’s excellent service enabled us to have our warehouse in operation ahead of schedule."

Harry G. McNeely, President St. Paul Terminal Warehouse Co.

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Planning Architects’ Radio and Television Publicity

If you’ve something to say about your profession, say it into a microphone! Here’s a public relations guide to approach, execution and follow-up for radio and TV publicity for use of Architects.

DAVIDSON
ARCHITECTURAL
PORCELAIN
ENAMEL

Lasts a Lifetime

Illustrated at left is a typical Davidson application... a transition of the old to a sparkling new face. Specified by architects McLaughlin & Keil, Leader Store, Lima, Ohio.

Davidson architectural porcelain enamel available for all type structures... new or old. Panels of 16 gauge steel produced in practically any shape desired. Buildings may be covered without structural changes. Wide range of colors available. Flawless color matching for replacements when needed.

Every job custom designed and produced.

- Minimized Maintenance
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Minneapolis, Minn.

By ROBERT P. THOMPSON
Public Relations Counsel

In this installment of our series on architects’ public relations methods, the relatively new fields of radio and television are considered and found readily adaptable to carrying professional messages.

In planning radio and TV publicity you must first examine the media you have to work in. Radio and television, like a newspaper, derive their revenue from advertisers, base prices on the number of their listeners and seek to stimulate the economic activity of the locality which they serve. They differ from a newspaper, however, on these points: (1) they rely more on entertainment than information to hold an audience, and (2) they use sound plus sight to tell a story.

Radio as a news medium is second only to the newspaper!

Before you can present architectural material to radio and television stations, it would be well to know which station(s) you should submit your material to.

Study the stations in your area. Remember, both radio and television have a complicated system of network affiliations which control, more or less, the “open” time allowed for local shows (and your publicity). It’s for these local shows that a station will use the material you offer.

Besides the network stations, there are many smaller stations and some large, called independents. These independents are to some extent in
competition with the network but they must program their entire day against the network’s few hours of local programming a day.

All stations, whether they are network affiliates or independents, have time available for local shows. This is the time you are concerned with!

Independent (non-network) stations offer a better opportunity to present material for, as stated before, their programming is a major part of their everyday job. So, in looking for the station which may give you a better break in using your material, a strong independent may be the station to contact.

Before you run down to the station and expound on your theories of architecture to a busy, harried station manager or newscaster, monitor the radio and TV stations in your area. Make a list of local shows, their stations and the talent handling the shows. You'll find news programs, information programs, special events programs and audience-participation of the “quiz” and “town meeting” type lend themselves best to publicity.

These programs, with the exception of news broadcasts, offer you an opportunity to present your profession in an accepted manner with an authoritative voice. You are the expert!

Information Programs—

This type of program calls upon important individuals in your city and country to present their views on subjects they are qualified to speak upon. The audience for this type of program is found usually among the more learned individuals.

For your purpose, this program is the most beneficial for in this program you are the main element, you are interviewed by the announcer or emcee and can express your views on the profession. Then too, this type of program lends itself for a series instead of a “one shot” program. You’ll find station talent and managers are eager to obtain guests for this show.

On the TV side of the ledger you’ll find information shows developed for the woman viewer. Many TV stations have a house-
Closet door problems solved with

**Pella WOOD FOLDING DOORS**

With ordinary swinging doors, closet corners are hard to reach. Pella Wood Folding Doors give access to all available closet space. Instead of sliding or swinging out, Pella Doors fold back compactly. Ideal for closets, between kitchen and dining room, in bedrooms, between living and dining area. 3 standard paint colors, natural wood finish or unfinished. A complete packaged unit. Anyone can install. Economical . . . compare with prices on other doors.

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wives' show into which an architectural series can be built, using models and drawings. Contact the talent and detail your idea. You'll be surprised at the reception you may get.

**Audience Participation**

This type of show is for entertainment but you can get a message across if you plan and work with the talent. The "quiz" is the most popular. Ask the station if they'll use a group of architects to compete with each other. Explain to the station management your purpose for appearing. In all cases your relationship with the station and its talent should be honest and straightforward.

**News**

Every station has one or more local news shows. News comes off the local wire or is turned in by radio reporters and rewritten in the newsroom by writers and newscasters. These men know the value of good news and report this news to their listeners and viewers.

Before you even consider a radio newscast as an outlet for your material, ask yourself if your material will interest the listening audience. If not, forget it! But if you feel the information you have to offer will be of great interest, write down the facts—who, what, where, when, how and why—and take them down to the studio. Explain to the news director your purpose in bringing the information to him. Ask him to give your material consideration and then leave.

Do not impose upon this man; he is busy and he has many shows to prepare. If your facts appear in good order and are important to a large share of the listening audience, you will receive consideration. Major appointments to public service, community or business groups, large construction jobs designed by

**Too Early? Heck No!**

Make your plans now to attend the 1954 Convention of the Minnesota Society of Architects and watch for future announcements in "The Northwest Architect."
you or your firm and meetings will demand air time.

TV newscasts depend upon visual presentations to hold interest. If you have a major project which would be of interest to the general public, you should contact the television station's newsroom, give them the facts about the project and submit a perspective. They will present the facts, written in the style of the newscaster, using the perspective as an aid in gaining attention and holding interest.

If the story is not used, don't become irritated or resentful. Many items of interest are placed on the news director's desk daily. It is up to him to determine the news value of each story and schedule it in the broadcast.

If you use good judgment and an intelligent approach, you will receive not only the respect of radio-television talent and management but also their wholehearted support and co-operation.

It's good public relations with these organizations that will, in the long run, benefit you greatly. These men are in business like yourself and their time, as well as yours, is valuable but if you have a well planned program to present, they will be glad to take the time to talk with you and aid you toward your goal!

CECO CHAIRMAN DIES

The chairman of the board of Ceco Steel Products Corporation, C. Louis Meyer, died recently at the age of 67. A native of Omaha, Mr. Meyer was graduated from the University of Nebraska in 1907 and took his mechanical engineering degree from Columbia in 1909.

He invented a system of reinforced concrete floor joist construction involving the use of removable steel forms on a rental basis and in 1912 founded the Concrete Engineering Company to promote the invention. The name of the firm was changed when it took on other activities and products.

Nothing is free—even a man sporting a black eye has earned it.

Confidence is sensitive—it never returns if it has been abused.
INSULATION SALES STAFF PLAYS GOLF

Shown here during the sales staff’s annual golf party are golfers of the Insulation Sales Company, Minneapolis. The tourney was held at the Golden Valley Country Club. Shown in the picture at left (l-r) are Bob Wefel, Don Ferguson, Jim Anderson, Doug Dunsheath, company president, Wm. Steinworth, Bob Streifel, Earl Bartholomew and Ned Kailing. In the right hand picture are Paul Stevenson, John Wilson, Russ Bock, Phil Anderson, Doug Dunsheath, Don Colebank, Art Phillips, John Johnson, Fred Wigeheers and Ed Lynch.

DES MOINES CLAY PROMOTES THREE

W. J. Goodwin, Jr., president of Des Moines Clay Company, has announced that C. T. Bridgman, manager of Des Moines Clay Company, has been appointed director of engineering and research for the Goodwin affiliate companies, manufacturers of clay products.

Bruce Paterson, who has been in city sales, will become acting manager of Des Moines Clay Company and George Osten, sales manager of Des Moines Clay Company, has been made assistant sales manager for the affiliate plants in charge of contract work for southern Iowa.


Your home, like your life, is what you make it.

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802 Pioneer Bldg., St. Paul 1, Minn.
CEdar 4903
Northwest Representative

NORTHWEST
NOISE CONTROL MOVE GROWS

Noise control within buildings and in communities is becoming more and more of a problem and groups seeking its abatement are using the latest scientific equipment to search out its causes and control them. Organized programs in large factories, etc., have brought about reduction in noise of as much as 7 to 15 decibels. One of the foremost control methods is application of acoustical materials although other items like loose gears and safety guards typify minor factors which contribute heavily in-the-mass to noises.

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Every ROMANY color is fade-proof, sun-proof, wear-proof. It is an integral part of the tile itself, kiln fired for the life of the tile. Every ROMANY color has been selected to fit the pattern of modern requirements in industrial, commercial and institutional buildings, as well as residences. Beneath the glazed color face with its cushion edge is the buff body which insures the wearing quality for which ROMANY is noted. Other features include water, stain and fire resistance, and unsurpassed sanitary advantages.

Every Architect should have our Sample Tile Chart No. 6. It’s free.

SURVEYING Theory and Practice

By R. E. Davis and F. S. Foote
University of California

4th Ed. 1,021 pp., 436 illus., $8.00

This exceptional guide begins with a consideration of fundamental concepts, features of surveying instruments, field work, computations, plus a discussion of errors to point the way to better surveying practice.

Then with clear, step-by-step instructions it shows you how to perform all the elements of a survey, how to measure angles, distances, and differences in elevation in the field and how to plot these quantities in the office.

Principles of field astronomy are treated at length as well as practical instructions in the common methods of determining latitude, longitude, and azimuth applicable to surveys of ordinary precision.

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- Current European transits and levels
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- 6-place log tables
- General Tables for field astronomy

Increase your surveying skill!

This 3-step standard guide and reference shows you how

From simple selection of equipment to complex handling of map projections, this book offers positive help to all surveyors and engineers no matter what their degree of experience. It accomplishes this with a comprehensive, 3-step approach to the whole subject that shows you the fundamental procedures. Follow the basic instructions and you will learn the art of surveying.

The 4th Edition continues the authoritative, thorough coverage of good practice supported by clear explanations of basic theory that has made this a standard volume for all concerned with surveying. It provides a reading and reference treatment of practically everything you need to know for complete, successful surveys.

Just Published—4th Edition

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Saint Paul 14, Minn.

33
TACONITE AND HARDWARE SALES ENTER NORTHWEST STEEL SALES PICTURE

Growth of the taconite industry in northeastern Minnesota and sale of packages of small steel pieces for hobbyists' use in home workshops are recent steel developments of interest to Northwest steel distributors, the American Steel Warehouse Association was told during a September tour of Twin Cities steel outlets.

The Twin Cities now are the Northwest's major source for steel to be used in construction and manufacturing, with big warehouses like those of Paper-Galmenson and U. S. Steel Supply typifying the size of the operations.

"Steel never sleeps," K. P. Rindfleisch, vice-president of U. S. Steel Supply, Chicago, said in outlining position of the industry to the visitors. The group's opinion was that development of the taconite process can give Minnesota more employment, more wealth and more industrial prestige than iron ore ever did. Mr. Rindfleisch told listeners further that he did not believe steel and aluminum would ever indulge in a cut-throat battle for business because there were many special needs for use of both.

The Twin Cities are now ranked thirteenth in the nation for steel sales, he said, and local company sales staffs are among the most aggressive in obtaining continued and new business. A steel firm must have three stock turnovers a year to keep out of financial trouble.

ARCHITECTS AGREE "IT'S THE MOST VALUABLE CLAY PRODUCTS CONSTRUCTION BOOK"

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Region 6
Ames, Iowa

MOST BRICK IN REDS

Ninety per cent of the building brick produced in the United States are either red, buff, or cream colored. In the ten per cent remaining is found almost the complete range of the spectrum.
During the steel tour our cameraman saw (opposite page) 1—Mr. Rindfleisch addressing the group; 2—Dr. E. G. Booth of U.S. Department of Commerce, Gene Andrews of Business Development, St. Paul; and H. M. Zweig, U.S. Steel’s assistant district manager; 3—Clyde B. Colwell, U.S. Steel’s district manager; 4—T. E. Guth of U.S. Steel, K. W. Bennett of “Iron Age” and W. R. Winter of Williams Hardware, Minneapolis; 5—Bruce Osborne, Jr., with tour group; 6—Robert Walker of Ryerson Steel, Louis Villaume of Russell-Newman-Villaume Co., William Keelor of Keelor Steel, J. Stranahan of Chicago Steel Sales and C. B. Colwell of U.S. Steel.

CODE OFFICIALS LISTED

A comprehensive 68-page directory of those public officials of the Northwest and adjoining states who administer and enforce codes and regulations governing building construction has just been released by the Midwest Conference of Building Officials and Inspectors.

The new directory also lists the type of codes under which the governmental agency regulates building, plumbing, electrical, heating and related subjects. Where the information has been obtainable it includes listings of all officials of villages, townships, cities, counties and states of the area. Included are listings covering the states of Minnesota, North Dakota, South Dakota, Wisconsin, Ohio, Michigan, Indiana, Kentucky, Illinois, Iowa, Missouri, Kansas and Nebraska.

The directory carries a limited amount of advertising and a brief résumé of the functions of the Midwest Conference of Building Officials and Inspectors. It is available for purchase at the office of the conference, 207 Holliday Building, Indianapolis, Indiana, at $10.00 per copy.

Structural clay facing tile, one of the youngest of all clay products, is frequently confused with ordinary wall tile, which is less than one-half inch thick and does not support its own weight. Facing tile, seen often in gymnasiums, bus terminals, lobbies and corridors in schools and churches, is usually at least four inches thick.

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KENwood 5002
JOHN DAWSON NAMED TO A.I.A. BOARD OF EXAMINERS

John W. Dawson, secretary of Ellerbe & Co., St. Paul architects, has recently been named to the board of examiners of the American Institute of Architects. The A.I.A. examiners review and clarify the group's code of entrance requirements.

Mr. Dawson has been clinic designer for the Ellerbe organization for the past eight years and his work is found in outstanding buildings in several parts of the country. His appointment is another in a series of honors and recognitions given members of the architectural profession in this part of the United States by the national organization.

PELLA ADDS ST. CHARLES KITCHENS

An artist's drawing shows one of the possible arrangements of St. Charles units.

PELLA PRODUCTS has recently obtained an exclusive franchise for St. Charles Kitchens in the area served by the Twin Cities. Curtis Johnson, owner of Pella Products, visited the major manufacturers of steel kitchen equipment before selecting St. Charles.

The extreme flexibility of the basic units, the score of accessories, the full range of decorator colors make it possible to furnish a kitchen in keeping with the construction and appointments of any home, Mr. Johnson said. Another feature that prompted his decision was the fact that many people favor the appearance of wood and St. Charles is the only manufacturer of steel kitchens who will furnish birch exteriors, thereby giving all the advantages of steel construction with the charm of natural wood.

Since the name "Pella" is of Dutch origin, it was decided to carry out one of the display kitchens in a Holland Dutch theme. The other kitchen display features contemporary ideas which include a fireplace and barbecue. Pella Products has substantially expanded its showrooms and has complete displays showing the details and construction of Pella Casement Windows, Pella Venetian Blinds, Pella Rolscreens, Pella Wood Folding Doors and Pella Fireplace Rolscreens.

GARDNER HARDWARE CO.

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In Minneapolis

COMMERS-GROTH, INC., 407 W. Lake
terior board designated as Class F finish in Commercial Standard CS42-49, issued by the United States Department of Commerce. Recently, each of the 13 members indicated that, as soon as manufacturing facilities could be adjusted, the company would produce all its regular insulation board materials designed for interior finish uses with this Class F flame-resistant surface.

Though this is a significant step, this industry has already taken another—perhaps more significant—to determine the importance of this flame-resistant coating from a life-safety standpoint. Tests have been conducted at the Factory Mutual Laboratories in Norwood, Massachusetts, in an effort to evaluate the contribution of wall and ceiling finish to the temperatures induced by a fire within a closed room. Preliminary tests indicate little significant difference in the temperature rise in a room finished with insulation board wall and ceiling products coated with this Class F protection and those encountered in a room with non-combustible wall and ceiling finish.

Further tests have been conducted for the Insulation Board Industry at the Forests Products Laboratory in Madison, Wisconsin, in which rooms of average residential size and furnishings were completely burned out both in rooms with combustible and with non-combustible wall and ceiling finish. In all these tests, it was clearly shown that the customary furnishings of most dwelling rooms provide enough fuel to create a serious fire, indicating that fire-safe construction features in our homes, such as proper firestopping and adequate exits, are of major importance regardless of how “fireproof” the construction materials may be.

Once a fire starts, it spreads not only by direct contact of the flames and by movement of hot air and combustible gases through channels not provided with fire stops, but also by elevating the surface temperature of combustible materials to their ignition point by direct radiation.

Let's look at Maurice Webster's report of the LaSalle Hotel fire, as it appeared in The Atlantic Monthly in October, 1946. Mr. Webster said this fire followed a general pattern. "An area in the ground floor—dining room, bar, lobby, or connecting store—bursts into
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flame. . . . The enormous expansion of flaming gases creates its own draft, carrying smoke and fire up open stairways and elevator shafts. Each well or shaft is like a chimney except that the outlet at the top is sealed, while holes in its sides lead into bedroom corridors. . . .

D. H. Bates, West Coast insurance executive, in his constructive booklet entitled "Stop Fire—Save Lives," emphasizes the importance of adequate ventilation at the top of these vertical shafts, as well as ventilation of attics and similar spaces where hot gases may become trapped. Such ventilation, Mr. Bates points out, should be provided by roof ventilators equipped with louvers or dampers which automatically open at high temperatures or pressures, releasing the hot gases before they "mushroom" throughout the building.

Most building codes have required such ventilation of stages in major theaters and some modern codes have extended this regulation to include all vertical shafts. As long as there is no effective means of eliminating human negligence, any building can become involved in a substantial fire and, therefore, Mr. Bates logically concludes that all major buildings should be designed so that pre-ignited and super-heated gases resulting from a fire within any part of the building are subject to directional control ventilation rather than uncontrolled "mushrooming" throughout the building.

A study of the official reports on this fire and others, such as the Winecoff Hotel in Atlanta, indicates that the most hazardous conditions contributing directly to rapid spread of fire are open shafts such as stairways and elevators and improper fire-blocking of furred-out combustible construction. In fact, the National Fire Protection Association report on the Winecoff Hotel disaster contained the significant statement that "a single fifty-dollar door installation at the entrance to the stairway from the third floor (if closed) would have prevented the spread of fire to the upper floors," and it was on these upper floors that most of the loss of life occurred.

Had these conditions been corrected, these fires would undoubtedly have been brought under control without tragedies, as are numerous fires which occur daily in properly constructed buildings, without making headlines across the nation.

Practically any building code adopted within the last two decades provides regulations for reasonable fire safety of buildings of all types of construction and occupancies. Unfortunately, numerous buildings have been built in all sections of the country either without the jurisdiction of building codes or under improper codes now considered to be obsolete. Some communities, realizing the hazard of existing buildings which do not conform to modern building codes, have adopted legislation aimed at correcting these hazards. The following eight recommendations, if generally followed, would go a long way in assuring against loss of lives in future fire disasters:

1. Enclosure of all shafts such as stairways, elevators, dumbwaiters, clothes chutes, etc., with fire-resistant construction.

2. Prohibition of any combustible wall or ceiling furring permitting concealed spaces for fire to start and
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—Architect

Bosshart Construction Co., Truman, Minnesota—Contractor

Trinity Lutheran Church, Madelia, Minnesota

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spread rapidly without detection unless such furring is properly fire-stopped.

3. Fire-stopping of all frame walls and partitions at floors and ceilings.

4. Subdivision of large combustible attic spaces into areas not exceeding 3,000 square feet by fire-resistive barriers from the ceiling to roof.

5. Buildings with excessive undivided areas not in accordance with those generally permitted by modern building codes for the occupancy and type of construction involved should be provided with necessary fire-resistant walls or partitions to subdivide the building into smaller areas more in accordance with the limitations provided in such modern codes or they should be provided with automatic sprinkler systems and fire detection devices.

6. Buildings exceeding the height limitation for the type of construction and occupancy permitted by modern building codes should also be provided with automatic sprinkler systems and fire detection devices.

7. A building with inadequate exit facilities as required by modern codes for its occupancy, type of construction and height should be provided with such additional exit facilities or escapes to horizontally protect areas of refuge as necessary. Such horizontal escapes are especially important in hospitals, convalescent homes and similar buildings since the patients can be evacuated from a hazardous area to another area on the same level, protected by a fire-wall, without the difficulties encountered in carrying such patients down the fire escape stairways.

8. All owners and operators of public buildings as well as their employees and the occupants should be instructed in the proper use of buildings to avoid the hazard of starting fires and in the proper procedure to be followed in the event of a fire, both in evacuating the building and fighting the fire. Regular fire drills should also be conducted in buildings customarily occupied by the same persons such as schools, nurseries, dormitories, convalescent homes, etc., to assure the orderly evacuation of the building with minimized panic in the event of a fire.

Such instruction, however, should not detract from the importance of calling the fire department immediately when any fire is detected. Too many fires get out of control due to a delayed alarm while the occupants are futilely trying to control it.

The word "fireproof" has its place in our vocabulary and in our thinking. It is the ultimate in construction we, in the building industry, would like to attain. So let's not abandon our search for this Utopia but let's make sure we understand it.

NEW GRANDSTAND CATALOG AVAILABLE

Wayne Iron Works, Wayne, Pennsylvania, has announced recent publication of a new 4-page illustrated brochure with specification insert describing its Wayne Type "C" Portable Grandstands. Full details are given as to construction, materials used, dimensions, capacities and safety standards, all useful information to architects designing athletic facilities. Complete specifications are covered on the insert page. Grandstands are designed to be easily taken down, moved and set up again but may also be used permanently outside or indoors.
announces the opening of its autumn-winter activities among members of the American Institute of Architects.

As representatives of America's outstanding manufacturers of building materials and equipment, Producers' Council members are avowed to further broaden their constant endeavor to be of greater service to the American Institute of Architects.

Messages of interest to the A.I.A. will be published in a series of insertions in subsequent issues of NORTHWEST ARCHITECT.
Modern "Open Planning"... with a provision that lets you "leave the dishes in the sink" is a practical reality with "Modernfold" doors. These handsome "movable walls" do away with the need for permanent partitions between living and service areas—throw the whole house "open for living."

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employs only his own mechanics. His crews, which number about 45, are made up of men carefully trained by picked associates, first in laying, then in sanding and finishing. Estimating and trouble-shooting are "postgraduate" training for all his men.

"The commercial field of floor installation is relatively uncrowded at present," Mr. Gerrard said. "Although this does not mean anyone can set up in business and find it easy it does mean there are fewer of us qualified to fill the demands and we are educating the builders in the values of our services to them."

Biggest jobs handled by the firm were the 1,250,000 square feet of flooring laid in an army camp, which took the entire crew of 45 but which was finished two weeks ahead of schedule, and the 27 carloads of flooring which went into the largest building under one roof in Mississippi, the new Alexander Smith & Sons Carpet Company plant in Greenville.

**AREA CONSTRUCTION OUTGAINS 37 EASTERN STATES**

A 6 per cent gain in construction contracts awarded for the first eight months of this year in Minnesota, North Dakota, South Dakota and northwest Wisconsin put this area above 37 eastern states in percentage gain, according to the F. W. Dodge Corporation. Total awards for the eight months were $329,927,000.

The organization reported that if the current volume of awards keeps up, 1953 may become another record breaking year and the area of the Northwest reported

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ONE HUNDRED YEARS AGO
of the great Crystal Palace
Exposition in London of 1851, vast halls with roofs and walls of glass caught in a slender web of bright red, gold, blue and green metal actually enclosed ancient elm trees beneath their crystal vaults which curved over the tree tops a hundred feet above the pavements below.

T HIS unbelievably successful demonstration, by a greenhouse builder in competition with the best the architects could do in that day, has stood before the

NO WONDER (Continued from Page 6)

jobs. Their limited time outside of office hours and homekeeping and commuting travel must be conserved for them or they won’t remain “customers”; they might actually acquire mail-order and telephone buying habits. Many already have.

T HIS NEW WORLD CITY project which we are describing here offers the best possibilities for a large increase in rental returns to owners and tenant merchants at the lowest cost and with the least disturbance to the momentum of historic community development.

THE MONEY “cost” of such a project must really be book kept as a profitable investment for the whole city, returning actual cash dividends not only to a couple of hundred merchants, but to people in all suburbs. At the same time it makes available a delightful daily experience to all who, a-foot or a-wheel, are obliged to spend a few hours of after-business-hour routine in the heart of any clattering, smoggy, distracted business area.

For it is in cities that have winter and summer storms where glass covered, sun lighted, pedestrian streets can be planned, wide and high, warmed in winter, cooled in summer, offering access from all four sides, from below as you shall see, from above—and I am not here thinking of helicopter service.

Sidewalk cafés will thus be able to conduct business the year around with no disturbance by rain or snow. Space for these will be licensed to the merchants directly in front of their places of business for specified hours. Thus will be made free the whole smooth marble pavement of this new world street, perfect as a dancing floor, free from traffic hazards. After conventional business day-time rush-hours and on certain evenings these beautiful tropical streets with the full moon shining down through the over arching crystal vaults would be the scene of public recreation; music, fetes, or on Sundays and holidays provide the opportunity to simply sit and relax undisturbed by gas odors, noise and distracted crowds.

ONE HUNDRED YEARS AGO
of the great Crystal Palace
Exposition in London of 1851, vast halls with roofs and walls of glass caught in a slender web of bright red, gold, blue and green metal actually enclosed ancient elm trees beneath their crystal vaults which curved over the tree tops a hundred feet above the pavements below.
world unrecognized, for the past hundred years offering
a practical answer to our own pressing economic and
financial problems, with no takers until Dayton's had
the prescience to offer freely to everyone a great glass
enclosed court, warm and mild, a few feet from the
tenseness of 30-below weather, with tall growing tropi­
cal trees in flower and leaf all available for daily winter
enjoyment.

But even in Southdale there will be a missing factor,
and that is public recreation of civic dimensions. Our
proposal combines new, better, and more profitable
business, with a new kind of public relaxation. Directly
in the center of that city area where the most buyers
now are crowded we propose to take the pressure off
their overworked hearts.

So it is not just a glass "arcade" or practical pleasure
dome which I am offering as something desirable in
itself, but a relation between such a building and the
forces now in uncontrolled confusion and already initi­
ating an explosion which will, indeed has already, pro­
duced cracks in the merchandising fabric of the city
considered as a whole.

NORTHWEST ARCHITECT in

a future issue will show
you a city plan and more photographs of such a
"conservatory" of business as we propose which
has been tested in service for many years and
which has proved highly successful.

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tomer convenience and comfort have been cramped
by too much theory based on clever reasoning rather

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Opportunity is now here for an Institution of Commerce of the Whole City, with a new circumference for operations and sufficient vision to include both city government and the community of business.

It takes an aristocracy of imagination to move into a new type of accommodation, one which will influence at least twenty blocks of the city, and creating at once a very large amount of new business which does not exist at all at the present time. Best of all, this would be done without taking business from anyone now struggling with the handicaps which are pressing on all individual merchants, small and large. It would not only create a larger volume of business, but would reduce the cost of selling by refreshing the mind of the buyer now pummelled by too much huckstering. The Dayton Company is not only buying a new sales and service tool, but they are embedding it in a built to order community of customers to buy their goods. These will be prospects who will not need to be screamed at as did the hotel bus drivers lined up at old time railway stations. The new day customer doing his buying in a holiday atmosphere will need no expensive high pressure print and picture to bring him to the market place.

The complete revision of wholesale relations with merchants envisioned in our Centergreen Gallery would result in time saving and labor saving, with the consequent reduction of cost pyramiding in the price structure, thus enabling all types of business to sell more goods and make more money without being obliged to maintain an artificial volume of sales by means of expensive advertising, the “copy” for which must be built up by ever increasing exaggerations farther and farther from any relation to the goods and services.

In our proposed Centergreen Gallery the use of the project is the advertisement. In this bid for the spend-dollar, the varied services to be rendered with such expedition are the “reason-why” factors in the message, and the delight in sun and warmth and mellow conservatory air with living foliage and flowers, provides the emotional equivalent of “do it now” including the enticing though “and relax in enjoyment.”
QUAINT ISN'T IT? Silly old furnishings, all stuck on, "the past copying the past copying the past and hanging the result on . . .," but wait—right there lies the meat in this nut.

We show you these pictures so that in due course we can get where we can tell you not to look at them—really. We hope you will come to use them, with the help of our report, in such a way that you can experience, even if only in imagination for the present, some old institutions still alive and useful.

The next development of American cities everywhere needs much more than cleverness, more than new and "original" ideas. City planners need to know which basic concepts worked and which did not. Minneapolis is in desperate need of immediate solutions, of practical demonstrations which give promise of continuing benefits. Nor can we expect executives passing on plans to be over-quick, where proposals have had no operational testing.

The past taught the not-so-past, which in turn taught the present, or should have taught our "modern," (but maybe not quite so modern) world of this day in 1953. The past should have taught architects, but the deep wisdom of the people, who learned through tough fate, we have lost. Much that could have helped still lies unused because the self labeled traditionalists of 1900 tied the world of art and architecture hard and fast to appearances. Thus the history of the great world of work, of things accomplished, was excluded from the aristocracy of the privileged. Tradition got tied to aesthetics instead of remaining the continuity of know-how.

But architecture survives not by the durability of the building materials nor the "design" of its forms. Architecture is not things; it is process, and continues to flow only by means of and through the adaptability and resourcefulness of its service idea. Architectural showmanship grows stale as fashions change; the flow ceases and the channels no longer serve. Living architecture is only a temporary container for a continuity of physical and emotional satisfaction that must be kept moving.

The art of architecture is the science of providing for the whole man seeking the good life. Sullivan said, "Architecture is the Great Life." To detach ourselves
from history is not possible, because history is not just what happened yesterday or last year. History is not “story”; it is High-story. It is the report that is related to us hard at work trying to live successfully, so that we may be moved, and in turn put life into tomorrow.

By this light we come to the practical use of history. So, with that, let’s get back to the photographs as history—a hundred years of it, for this Gallerie idea had ancestry. Never mind the columns and carved cornices, podiums, plinths, and keystones; they have their uses in the heart and will have. What we want to see is the forest beneath this foliage, the practical “enterprise” as a service idea producing trade, occupations, non-commercial entertainment. Let’s find out what good business and more of it can heal civic neuroses and homogenize the activity of the human hive. Let’s find out what this old Italian tradition-in-trade has to offer Minneapolis, which now has no tradition of cooperation between city government and collective merchandising below the monopoly level.

Look behind the Renaissance facade of this 100-year ago Gallerie Umberto Primo. If you could walk into that great cool street for an ice and a pastry—or drop in some quiet Sunday morning to sit at a marble table in the “street,” to read your paper, have your breakfast, then you would not need to look behind because you would be using this civic grandeur, enjoying luxury at bargain prices. The best way to learn history is to make use of it.

The new tempo of life in Minneapolis should push this project to completion in ten years. Wind and dust and noise are persistent persuaders. Sub-cold and super heat make weather talk.

These inner street-fronts of the shops, which are shown as interior flat facades on Editorial Page and on Page A, will in our Minneapolis project of 1973 be made to step back story by story. The lower pavement and merchants selling space of our new day project will thus be opened more widely to the low slant of bright winter sun; and too, it will give a feeling of space needed to offset the fact that here in the NORTH the openings must be glass-closed — however open to view and light — and one does have to pass the valves of doors to enjoy this bit of Eden threatened by Kabokonoka, the Spirit of the North Wind with his sword of blue ice.

Thus you will start imagining how in 1973 you will find it unnecessary to go either to sticky Florida or
smoggy California. You can spend your fun-money at home and it will buy you more fun. In our next issue we will give you a plan layout for a certain two blocks, not more than a dollar throw from the Northwestern Bank (George Washington's Potomac dollar of 1753, that is) — and we will also show you some excellent photographs of what the corner of 3rd Avenue South and 8th Street could be looking like, before today's first-graders graduate from the University.

W. G. P.

CHILDREN'S MUSEUM

(Continued from Page 20)

600 square feet. Superintendent's office gets 150 square feet. Receptionist's desk is 60 square feet.

LOBBY: Groups of children visiting the museum should have a pleasant area in which to wait. Comfortable benches and chairs should be provided. Area will be 1,500 square feet.

STORAGE: Providing enough storage space is an important consideration in the designing of museums. Every person interviewed has expressed his desire that ample storage room be incorporated. Exhibits come in various sizes so the storage unit should have large as well as small receiving volumes. Portable storage cubicles of odd sizes could be used handily for the small to medium sized objects. Equipment used for storage can consist of shelves, stacked trays, cabinets, picture racks and other types of furniture; however, the requirements depend upon the nature of the materials stored and differ from department to department and from time to time. The architect's main duty is to give suitable storage space that is well arranged. The expansion of collections will determine the type of equipment needed. Equipment in use now consists of specimen trays with unit trays 20"x24", 24"x30" and 24"x36", depths 2, 4 or 6 inches, total height 36" to 76", metal shelving, commonly 36" long in widths of 9" to 36" and heights up to 10'; picture racks made in large rectangular units with steel channel frames and expanded metal woven wire mesh. The units are supported in series in a vertical position, each unit being mounted with rollers on overhead tracks so it can be drawn out in the plane of its stored position, height 9', length 12', 6" off the floor and 18" to 20" between racks; fumigating chamber, 4'6½" by 6'7" high with door of 36"x73".

PLAY AREAS: Recent developments in play sculpture and ingenius educative devices to be placed in this area should provide a pleasant variation in the atmosphere of the museum. Greenery and perhaps a small pond would be advantages. This area should aid creating an inviting environtment.

SERVICES: Toilets, janitorial spaces, maintenance room, receiving dock and parking.

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"Youth in Museums," E. Moore, 1941.

ARCHITECT

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NORTHWEST
On April 16th, the well-drilling rig on Floyd P. Jamison's Ranch near Morgan Hill, California, had reached a depth of 260 feet. Then, the bit encountered a texture different from the sandy clay through which it had been working. Curious, the operator brought up the drill, disclosing pieces from a buried Redwood tree. Paleo-botanist Lyman H. Daugherty of San Jose State College placed the minimum age of the stratum at 25,000 years but estimated the tree might have fallen as long as a million years ago. Similar finds of buried redwood, still sound, have been made in such widely scattered points as Philadelphia, Alaska and the Mediterranean coast.

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