



Industrial Metals

COMPLETE STOCKS

ARCHITECTURAL ALUMINU



A complete selection of architectural shapes and all o types of aluminum are available to architects and o tractors from the modern metals centers of Indust Metals, as near as your telephone.

FREE! New illustrated catalog and stock list of alumin architecturals is now ready. For your FREE copy we or call your nearest Industrial Metals office.

ALUMINUM • BRASS • COPPER STAINLESS STEEL • GALVANIZED SHEET

Distributor of Reynolds Aluminum

WAREHOUSE AND OFFICE 1110 North Sixth ST. LOUIS 1, MISSOURI Phone-MAin 1-4703 Area Code 314

WAREHOUSE AND OFFICE 410 Southwest Boulevard KANSAS CITY 8, MISSOURI Phone-Victor 2-1041 Area Code 816

WAREHOUSE AND OFFICE 2028 Northern Street WICHITA, KANSAS Phone-LYric 1-3455 Area Code 316

WAREHOUSE AND OFFICE 7201 East Reading Place TULSA, OKLAHOMA Phone-TEmple 5-8454 Area Code 918

.





February, 1963

Dear SKYLINES Reader:

If you're receiving SKYLINES and Midwest Architect for the first time, it's because your name was suggested by a member of the Kansas City Chapter of the American Institute of Architects or by someone else on our regular mailing list.

After 12 years of uninterrupted publication, SKYLINES takes on a new name with this issue - SKYLINES and Midwest Architect.

The name change was made to more accurately reflect the interests, scope and circulation coverage of the magazine. While it remains the official monthly journal of the Kansas City Chapter, A.I.A., the magazine is now being sent to Kansas and Missouri Architects who are not members of the K. C. Chapter, plus hundreds of other persons all over the United States who are interested in architecture. A circulation breakdown appears with the latest rate schedule on page 32.

We hope that all of you - whether you're reading this publication for the first or the 146th time - will continue to let us know what you like - and <u>don't</u> like - about the magazine. And we're always happy to have your suggestions and ideas on subjects for future issues.

Cordially,

The Editors



KANSAS CITY CHAPTER

FOUNDED 1890

CHAPTER OFFICE

306 Davidson Building Kansas City 8, Missouri Telephone—Victor 2-9737

EXECUTIVE SECRETARY

GERRE JONES Honorary Associate of The Kanasa City Chapter of The American Institute of Architects

OFFICERS

PRESIDENT

VICE PRESIDENT

SECRETARY

TREASURER

DIRECTORS

1963-1965

1962-1964

1961-1963

Louis H. Geis Geis-Hunter-Ramos 704 Davidson Building Kansas City, Missouri

Gene E. Lefebvre Monroe & Lefebvre 818 Grand Avenue Kansas City, Missouri

Frank H. Fisher Marshall & Brown 1016 Baltimore Avenue Kansas City, Missouri

John E. Jameson Voskamp & Slezak 18 East 11th Street Kansas City, Missouri

Dwight C. Horner Horner & Horner 1401 Fairfax Trfkwy. Kansas City, Kansas

Mark S. Sharp Neville, Sharp & Simon 25 East 12th Street Kansas City, Missouri

Clarence Kivett Kivett & Myers 1016 Baltimore Avenue Kansas City, Missouri

SKYLINES

and MIDWEST ARCHITECT

TABLE OF CONTENTS

					١	Vo	I. 13
						No	o. 2
	FE	B	RL	JA	RY	',	1963
						P	AGE
St. Louis' Gateway Arch	,						. 6
Sculpture Notes From All Over							. 14
Sculpture Cost Estimating							. 15
Dulles International Airport							. 24
Addenda							. 29
New Advertising Rate Schedule							.32

Opinions expressed herein are those of the editor or contributors and the appearence of products or services, names or pictures in either advertising or editorial copy does not necessarily constitute endorsement of the product by the Kansas City Chapter of The American Institute of Architects.

Advertising in SKYLINES is subject to the approval of the Executive Committee of the Kansas City Chapter, A. I. A.

Subscription: one year \$3.00, three years \$8.00, single issue 50 cents. Special roster issue \$1.50. Copyright 1963 by the Kansas City Chapter, A.I.A.

ITOR Gerre Jones

ITORIAL BOARD

Chris Ramos, Chairman Ethel Sklar Roger Blessing Hal Hawkins John See

> SKYLINES is the official monthly journal of the Kansas City Chapter of The American Institute of Architects

PRATT & LAMBERT-INC. Specification and Color Service

John L. Dyche, Jr. Harvey Kallberg

BA 1-3400

4

SPECIAL LOW RATES FOR ELECTRIC HEATING!

Kansas City Power & Light Company Offers Special Low Electric Heating Rates for Offices, Stores and Other Commercial and Industrial Locations.

IF YOU ARE PLANNING A NEW OFFICE BUILDING, STORE or any kind of commercial or industrial project . . . expanding present facilities or making alterations — it will pay to find out more about the many advantages of Electric Space Heating. You may discover that it offers the real solution to your problem . . . and the rates are lower than ever before! Call GRand 1-0060 and ask for one of our Electric Heating Specialists.

HERE'S WHY YOU SHOULD INSTALL MODERN ELECTRIC SPACE HEATING...

CLEAN . . . No flame, no smoke, no soot; cleaning and redecorating costs are greatly reduced.

 $\ensuremath{\mathsf{FAST}}$. . . Speedy, almost-instant warmth—no long waits for equipment to warm up.

SAFE . . . As safe as the electric light you read by.

COMFORTABLE . . . Temperatures can be controlled at the exact degree you want in every room.

ECONOMICAL . . . New All-Electric Rate makes electricity for heating lower than ever before; usually cheapest to install and maintain.

SPACE-SAVING . . . Equipment requires less space than older heating systems; no chimney necessary.

HEALTHFUL . . . No flues or vents needed; steady, even heat; no hot spots, cold areas and drafts.

KANSAS CITY POWER & LIGHT COMPANY

5





rch

or the next year-and-a-half or so, a scinating show will be taking place St. Louis's riverfront as the Gateay Arch rises on the Jefferson Naonal Expansion Memorial. Erection the great arch, symbolizing the ition's historic westward movement ter the Louisiana Purchase, will be big, complicated engineering job that Ill require unique applications of nventional construction procedures. ich a structure has never been built fore. To permit visitors to view the ectacle in comfort, a grandstand will built along Third street on the mall front of the Old Courthouse.

ze of the 630-foot arch (tall as a 62ory building) and its enormous eight make its construction a formidle job. Its complex shape—an inerted weighted catenary—demands tremely sophisticated engineering chniques. So fine are the design paracteristics and so significant the mensions that an error of one-quarter an inch can multiply into an error millions of dollars.

dding to the construction problems is e inviolability of the gleaming stainss steel panels composing the structure's outer skin. They require the most delicate handling from the time they are made until they are welded in place. Extra precautions must be taken not to mar them.

The main piece of construction equipment will be a specially devised rig that will climb the arch as it builds it. Called a creeper derrick, the rig is a huge, 80-ton assembly that is, essentially, a tiltable platform, mounted on tracks fastened to the arch itself and supporting a big stifflegged derrick (drawing on opposite page). Various elements of the rig are standard, but making it climb the structure it is building is unique. Actually, there will be two such rigs, one for each leg of the arch to permit simultaneous construction of both legs. Most of this material on the engineering and construction of the St. Louis Gateway Arch and the Jefferson National Expansion Memorial is used by permission of the St. Louis POST-DISPATCH, and first appeared in the POST-DISPATCH'S Sunday supplement, PICTURES. We gratefully acknowledge the assistance and cooperation of Robert E. Hannon, author of the P.-D. material. Appreciation should also be expressed to H. Raymond Gregg, Superintendent of the National Park Service, Department of the Interior, St. Louis; James Marquardt of the G. M. Basford Co., and Gregory Franzwa, public relations counsel for the MacDonald Construction Co., prime contractor for the Arch project.

Each rig will ride on the outside of the triangular arch (this becomes the top surface as the arch curves upward and inward). The first six sections of each leg, rising 72 feet, will be built with conventional cranes working from the ground. The rigs will be assembled in place, probably next spring. Horizontal beams will be bolted directly on the arch at intervals, and the vertical tracks, 24 feet apart, will be bolted to these beams. Thus, the tracks will be held away from the arch's outer skin, which will be protected by sheets of corrugated metal fastened to the underside of the tracks.

The rig's deck or platform, 43 by 32 feet, will rest on a steel undercarriage that will ride on wheels locked onto the I-Beam tracks. The deck, hinged along the side nearest the arch and its outer edge supported by adjustable braces, can be kept level as it climbs the curving structure. At first the deck will project at an 85-degree angle from the arch; when the rig reaches the 595foot elevation, as high as it will go, the deck will be leveled at a 37-degree angle to its carriage. Because the arch tapers as it rises, from 54 feet at 1 ground to 17 feet at the top, the trac will be farther apart than the arch wide in the upper areas, but they w be held by the cross beams can levered over the outside edges.

> Proposed method for stabilization and closure of arch involves mammoth 80-ton scissors jack or truss, devised to thrust arch leas apart to overcome their deflection due to own weight and that of the two creeper derricks. It is "pinned" at 530-foot level. When final section of arch is in place, scissors jack would be removed, leaving 3121/2 tons of thrust in the arch in order to retain its shape and structural stability.

The late Eero Saarinen, architect, with an early model of the arch. Saarinen's design was selected in 1948 in a nationwide architectural competition to obtain the best master plan for developing the entire riverfront Memorial area.





The rig will be anchored in place while it builds three or more sections above it (the triangular sections vary in height but average about 12 feet), then will hoist itself upward on tracks mounted on the newly built sections. Power for the self-lift and for the derrick will be provided by a four-drum hoist on the ground 100 feet in back of the leg's base.

Little construction actually will be performed on the rig itself, it being mainly a support item for workmen who will be on scaffolds hanging from or bracketed to the outside and inside of the hollow arch. Welders, iron-workers, concrete men and others will get to their work sites on a small elevator fixed to one track from the ground to the rig's undercarriage, thence by ladders to the platform. On the deck will be tool sheds, a heated shack for workmen, and toilet facilities. Once up, workers will not descend un quitting time. Communication will by radio or telephone.

When the job is done, the rigs will lowered on the tracks, which will removed as they descend. Bolt holin the arch's outer skin will be plugg with stainless steel welds and w not be visible.

The rig will be provided and operate by Pittsburgh-Des Moines Steel Co which has the \$8,500,000 subcontra to furnish, fabricate and erect t contractor Main on steel. t \$30,000,000 project for the arc visitors' center and other elements the Memorial, is MacDonald Constru tion Co. of St. Louis. Two young m are top bosses on the job - A Prichard, 36-year-old project manag for MacDonald, and Kenneth J. Kol meier, 31, project manager for Pitt burgh-Des Moines.

COVER NOTES

TOP – A view of Eero Saarinen's model for the Gateway Arch and the surrounding riverfront Memorial. The 630-foot arch will be mirrored in the waters of the Mississippi, a short distance away.

BOTTOM - In this breath-taking, bird's-eye view, one of the final sections of the Gateway Arch is hoisted into place. The eight-ton section, a 17-foot eqilateral triangle, $8\frac{1}{2}$ feet wide with seven-inchthick "sandwich" walls, is being lifted by a giant creeper derrick that "climbed" the leg of the arch as it was built. The workmen at the lower right stand on the creeper rig's platform - other workmen on top of the nearly closed arch wait to fit the up-coming section into place.

Engineering the Arch

St. Louis' Gateway Arch may well rank among the great monumental structures of the world – structures like the Eiffel Tower, the Washington Monument and the Statue of Liberty.

The soaring stainless steel arch promises to be a distinctive landmark that will identify St. Louis as readily as the other structures distinguish Paris, Washington and New York. Besides adding enormously to the prestige of the city and providing a focal point for local civic pride, it should become a magnet that will draw visitors from all over the world, not the least of which will be delegates to the AIA national convention in St. Louis in 1964.

Heroic in size, unusual in design and spectacular in appearance, the 630-foothigh arch will be the country's tallest national monument, surpassing the 555foot Washington Monument in the nation's capital.



Cross-section of arch's top reveals car or "capsule" of passenger train at the end of its two-minute ascent. Steps lead to the 70-foot observation platform, where portholes will afford excellent views to the east and west and reasonably good views to the north and south. The train will consist of eight capsules with swiveling seats, so that passengers remain seated in a normal position as the train moves upward through the arch's curving leg. Second train, in the other leg, will be for down traffic. These were the original plans for the train and may be somewhat modified in the final construction.

Paris' Eiffel Tower is 984 feet; the Statue of Liberty stands 152 feet on a 150-foot pedestal. The arch will be much taller than St. Louis' highest building, the 369-foot Southwestern Bell Telephone Co. building and will be visible for 30 miles or more. The arch will also tower well over the 503foot, 36-story height of the Kansas City Power & Light Co. building.

Top of the arch will be 630 feet above

ground and the span will be 630 fee at ground level. It will be hollow with double steel walls and the arch structure itself will be triangular in shape. In cross section, each leg is an equilateral triangle with sides 54 fee wide at ground level, tapering to 17 feet at the top. Each of the three walls will be three feet thick at the base, diminishing to 7³/₄ inches above the 300-foot level. The arch's hollow core, also an equilateral triangle, tapers from 48 feet on the interior side at ground level to about 15½ feet in the upper portion.

The arch is in the form of an inverted weighted catenary curve – a catenary curve being the shape assumed by a chain hanging freely between two points of support. "Inverted" means the curve is projected upward to form an arch; "weighted" means the legs are longer than the upper portion.

Exterior surface of the arch will be composed of polished stainless steel panels ¼-inch thick and varying in size from bottom to top of the span. Joints between the outer panels are to be welded smoothly. Interior surface will be of structural steel plates three-eighths of an inch thick.

The inner and outer steel skins will be bolted together (bolt heads will not show on the outside) and the space petween will be filled with concrete to the 300-foot level. In addition to steel reinforcing bars, steel cables will be placed in the concrete mix as it is poured, and these will be tightened after the concrete hardens to provide additional strength. Above the 300-foot level, where the concrete filling stops, steel braces will tie together the inner and outer skins. This will make the top of the arch as light as possible and put the bulk of the weight in the base to reduce sway.

The arch foundations, already poured, contain 25,980 tons of steel-reinforced concrete keyed into bedrock at a depth of 44½ feet. Despite its great height and relative slimness at the top, the arch is designed to withstand winds of more than 155 miles an hour. It will not be absolutely rigid and is designed for a slight sway – calculated to be not more than 18 inches and scarcely noticeable on the observation platform at the top of the arch.



(Continued on page 22)

SCULPTURE NOTES FROM ALL OVER. . .



Ed Stone's new Perpetual Savings and Loan Association Building in Beverly Hills sports a 20 ft. high stainless steel and 24-carat gold dandelion in its front yard. The boy in the foreground may well be wondering what relation a half-ton dandelion has to a savings and loan association. Harry Bertoja was the sculptor.

Another rather startling stainless steel sculpture (below) has blossomed in Ottawa, Canada. Architect Normar Slater designed this 25-foot high Tree Fountain, with each branch designed to withstand up to 500 pounds loading.



APPROXIMATE COST OF A SCULPTURE PROJECT

by Robert Weinman Committee on Estimates National Sculpture Society

> To set a precise value on any work of art is impossible, and a completely fair and accurate pricing system will remain forever in the realm of wishful thinking.

Nevertheless it is hoped that this will assist interested committees, commissions or clients in determining possible prices for work at the present time and under present day conditions.

The estimates on the following pages were arrived at by a Committee of the National Sculpture Society consisting of Joseph Kiselewski and Bruno Mankowski with myself as Chairman. The committee has based its work on a similar chart prepared by the Society in 1955.

While considerable consultation with founders, carvers of stone and wood, and a terra cotta firm have guided the committee in establishing these approximate prices – they are just that, approximations. A price scale many times that indicated might be justified, because of the individual and exceptional merit of a particular artist's talents or if portraiture or historical research is required.

There are also the variables of how the design is carried out. Lavish use of subordinate motifs, fully realized and carefully wrought and undercut, could easily double the cost of a simple design.



A Guide for Estimating Cost of REPRODUCING SCULPTOR'S MODEL on Figures and Reliefs

REE STANDING FIGURE ... Approximate cost per Figure



SIMPLE RELIEF



Reliefs used in establishing approximate prices

COMPLEX RELIEF



RELIEF . . . Approximate cost per sq. ft.

		HI	2	IT	OF 4	R	6		N IN 8	1C	HES 10
	BRONZE	\$	75	\$	95	\$	133	\$	162	\$	196
STONE	Simple	\$	70	\$	90	\$	110	\$	125	\$	145
	Complex	\$	95	\$	115	\$	135	\$	150	\$	170
WOOD	Simple	\$	35	\$	45	\$	55	\$	65	\$	75
	Complex	\$	48	\$	58	\$	70	4	78	\$	90
TERRA	COTTA	\$	17	\$	20	\$	22	\$	24	\$	27

Approved and issued by the National Sculpture Society, Jan. 1962

PRICE CHARTS

The use of both charts permits the computation of sculptors' approximate fees plus approximate cost of stone or wood carving, bronze casting or terra cotta.

The charts were arrived at by averaging the prices given by various sculptors, foundries, carvers, and kilns, based on the examples illustrated. It is understood, however, that prices will vary according to the individual sculptor's ability, reputation and experience.

The charts can be used mainly as a guide for establishing budget prices even before the design for the sculpture is conceived. This gives a client a general idea of the costs before a project is undertaken, and it will not hamper competitive estimates. Final and accurate prices may have to be revised after sketches are made.

HOW TO USE SCALE CHART

To arrive at a price for a figure, refer to base line marked, "Height of Figure in Feet". Follow the vertical line under which the desired height of figure is shown, up to the diagonal price line. Then follow the intersecting horizontal line to the price indicated on the right.

RELIEFS

Prices for reliefs, based on the illustrations shown, vary according to projections of reliefs. For example, limestone relief, simple, up to two inches projection would cost \$70.00 per square foot to carve. A limestone relief, simple, up to four inches projection would cost \$95.00 per square foot. (Plus sculptor's fee – see Guide for Estimating Professional Sculptor's Fee.)

Bronze casting of reliefs up to two inches projection would cost \$75,00 per square foot. Bronze casting of reliefs up to four inches projection would cost \$95.00 per square foot (Plus sculptor's fee-see Guide for Estimating Professional Sculptor's Fee.)



QUALITY

at no extra cost. Specify ROBCO or ELGIN BUTLER glazed tile in 37 colors.



thin shells...

... of lightweight concrete

... with



BUILDEX, INC., BOX 15, OTTAWA, KANSAS

GATEWAY ARCH (Continued)

The following list of construction target dates for the arch was furnished by the National Park Service. It would appear that the schedule is now running about three to four weeks behind, since the steel for the first triangular section of the arch arrived on the site January 10.

1.	Job assemble Section 71 (12-tt. high south section	on) Dec. 17-21, 1902
2.	Erect Section 71	Dec. 24-Jan 4, 1963
3.	Start train-way tracks	Jan. 24
4.	Post-tensioning (vertical), Sects. 70 & 71	Jan. 25
5.	Begin interior framing for transportation system	
	and stairs	Mar. 11-17
6.	Erect creeper derrick (south leg) approx. 90 feet	
	above ground	Apr. 1-12
7.	First self-lift by derrick	May 27-31
8.	First 100 feet of arch erected	May 15
9.	First man-lift operation	June 21-28
10.	Termination of concrete core – elevation 300±	Nov. 11-15
11.	Start elevator installation – elevation 371	December
12.	Start installation of trains, etc.	Jan., 1964
13.	Install guys or struts - elevation 530	Apr. 13-May 18
14.	Insert key section (closure)	Aug. 3-31
15.	Transportation system test run	Oct. 1
16.	Remove hoisting equipment, clean up	November
17.	"First Ride" Day	Dec. 1
18.	Open to public for rides	Jan. 15, 1965



22

The Museum of Westward Expansion and a visitors center will be located underground at the Memorial, directly beneath the arch. Floor space below grade will total approximately 100,000 square feet.

The Museum of Westward Expansion, with 46,000 sq. ft. of exhibit space, will be the interpretative focus of the Memorial, wherein the epic story of the West will be dramatically presented to visitors. Here will be located the visual resources through which the historic western American experience will be translated into the most meaningful and imaginative museum exhibits that can be devised to tell the story.

American westward expansion in the 19th Century is a subject so vast and varied in content that every facet of the story cannot be detailed in the museum. Planning for the museum, therefore, has concentrated on four major subject divisions: the land; how t was acquired; the men who mastered t and the significance and meaning of Vestward Expansion to our nation and our people.

The exhibits have been researched and designed to convey the western drama to the visitor as a sequence of personal experiences, to relate in a compelling manner what it was like to participate in various aspects of westward expansion during the years between 1803 and the 1890's. Nine of the museum's cc units are cast in this personal experience mold, including "Explorers of the Wilderness", "Indian's Frontier", "Sodbuster's Frontier" and "Settlers to the Far West".

An interpretive documentary film will introduce and summarize westward expansion in a 30-minute program. This film will prepare visitors to more fully absorb and understand the various phases of the story to be seen in the museum itself.

No single museum has yet presented a comprehensive visual interpretation of westward expansion. Completion of this 12-unit museum and film will be a fitting companion achievement to the symbolic Gateway Arch.

SOME ARCH STATISTICS

Stainless steel exterior skin – ¼-inch Structural steel interior skin – 3/8-inch Stiffeners, splices, reinforcing, etc. Concrete filling – 6,238 cu. yards Interior framing, stairs and train

Total weight of arch

866 tons 2,157 tons 1,408 tons 12,127 tons 300 tons 16,878 tons

23



DULLES INTERNATIONAL AIRPORT

While this initial issue of SKYLINES and Midwest Architect did not start out as a monograph of the work of the late Eero Saarinen, several recent articles about Dulles Airport, plus a personal visit by the editor influenced us to include a few remarks about this structure. Most critics have commented on it setting, site adaptation, the soarin concept of the terminal design, etc. etc. Our first impression was the someone had accidently leaned hi elbow on top of a model of th Saarinen TWA terminal at Idlewild had sort of squared in the sides whil trying to take the sway out of th roof – and then someone else cam along, saw it and said, "It's just who the FAA wants!"

Since we're not a member in goo standing of the architectural critic union, we'll try to confine the re mainder of our remarks to the mor practical aspects of airport terminal in general, and Dulles in particular.

We think that Matt Rockwell, directo or Urban Programs for the A.I.A might have had Kansas City and he Great Airport location hassle in mir when he wrote the following in th A.I.A. JOURNAL last month: At the left is the interior or "club car" view of one of the much-discussed mobile lounges used to "whisk" passengers from plane to erminal and vice versa at Dulles International Airport in Washington, D.C. The vehicle will accommodate up to 90 passengers.

"As to the second point, (the distance factor separating airports from their market source) next week we fly by iet from Dulles to St. Louis, portalto-portal in 255 minutes, of which 125 are non-flying time. By then we will have 'done' it, used the mobile lounge, etc. The next time we think we'll return to Washington National and use the prop-jet. Total time: 237 minutes, with only 90 on the ground. We suggest that our site-selection procedures are something less than perfect — or at east that portion of them which are open to 'influence'. Moral: Air-minded architects should use their own influence to explain that airports are just another urban land-use which needs inclusion within the city. And be sure to explain just how that can be accomplished! (By planning, of course.)"

Then, a few days ago, we received a press release from the U.S. Plywood people, headed ''Waiting Room on Wheels Ends Airport Walkathon''. (Plywood furnished plastic laminate and paneling for the interiors of the mobile lounges, in case you're wondering how or why they got into the act.)

The release describes the motorized monsters in graphic terms – ''club car comfort'', ''huge'' and ''quartermillion-dollar step-savers'' are just a few of the adjectives used. While I realize that one must expect bugs in a vehicle ''equivalent in size to eight intercity buses stacked fouron-four'', about their only justifiable claim for improved efficiency is that they've licked the problem of the long wait for baggage inside the terminal.

Actually, it's strange that no one has come up with this solution before it's so simple. It took us 35 minutes to get from the plane to the terminal, It was all in 'club car comfort' to be sure, but a trifle irritating nonethe-less.

First, there was the long wait for someone in the terminal to wake up a driver. Then, I suppose it takes a little longer to get a "quarter-millionstep-saver" underway than it does a \$2000 Ford.

Add to this a slight delay caused by the driver not being able to line up his vehicle's ramp with the airplane door until about the fourth pass – coupled with the breathtaking one mile an hour trip in to the terminal and it's easy to see where a halfhour goes.

We understand the FAA anticipates an eventual need for 56 mobile lounges – they now have 24 – which would seem to add up to a total outlay (of our money) of around \$14 million – and that's if there's no model change and price increase in the meantime.

Estimates are that nine million passengers will have used Dulles International by 1975. Figuring the average plane-to-portal trip at a little more than a half mile, it comes to something over \$3.00 per passenger mile, assuming a full load each trip.

25



ECONOPACK—a standard multi-unit marble dressing room and shower

Econopack is the easiest way to specify long-lasting, trouble-free marble for combination dressing room and shower units in locker rooms, dormitories, schools, hospitals and other institutions.

Everything is included in Econopack's standard package—marble stiles, partitions and seats, 10 oz. white duck shower curtains, and a complete set of chrome-plated brass hardware. One specification does the job of supplying the best in multi-unit showers for your building.

Choose from three sound group A marbles—Napoleon Grey, Ozark Fleuri, or Ozark Tavernelle. All three are excellent marbles for shower installations.

For details, specifications and prices, phone or write Carthage Marble Corporation...Branch Office, 3030 Wyoming, Kansas City, Mo., Phone VAlentine 1-4928... Main Office, Box 718, Carthage, Mo., Phone FLeetwood 8-2145.

CARTHAGE MARBLE



Brian Blaine Belongs . . .



... in YOUR decorating picture

Mr. Blaine, Des. R. C. A., M. S. I. A., is an international authority on interior design. He is associated with Schooley's furniture and design staff to render professional assistance to the architect. Call for Mr. Blaine—for coordinated control of total design.



3401 Truman Road

BEnton 1-6650





• The 1963 conference of The Royal Institute of British Architects will be held in Sheffield, England, July 16 through 19th. The theme will be "The Architect and Productivity". The R.I.B.A. welcomes as delegates to the conference any A.I.A. members who might be in Britain at that time. For a copy of the program, write G. R. Ricketts, Secretary, R.I.B.A., 66 Portland Place, London W1.

• Regional director-elect Angus McCallum has been named 1963 Brotherhood chairman for the Kansas City region of the National Conference of Christians and Jews.

• The Zonolite Company, Dept. DF-24, 135 S. LaSalle St., Chicago 3, Illinois has a new 4-page technical brochure about dyfoam expanded polystyrene insulation – yours for the asking.

 How's That Again Department – "It's humanly impossible for our automatic sorting machines to handle certain sizes of letters and cards" – Post Office official commenting on the new (Continued on page 30)

APCHITECTS CALL SUPERCO POINTS "Distributors Since 1884"

"Color Consultants to the Profession" HAL SURFACE, JR. B. C. WRIGHT



J. E. DYCHE



1737 Oak St., Kansas City, Mo. Downtown Store & Warehouse HArrison 1-0455 addenda

regulation pertaining to shapes and sizes of letters and cards acceptable for mailing.

• On April 24 K. C. Chapter, A.I.A. members will hold a joint meeting with the Central Plains district of the American Society for Testing and Materials. Dr. Miles M. Clair, president of Thompson-Lichtner Co., Inc., and a past-president of the ASTM, will be the speaker. The joint meeting, in Pearson Hall at the University of Kansas City, will wind up a day-long conference on construction standards used in the selection of materials and construction specifications.



We just got tired of sending everythin out for reduction.

> Stolen from SOUTHERN ADVERTISER & PUBLISHE December 15, 1962



Need any more reasons for insulating masonry walls?

FOR COMPLETE INFORMATION, WRITE:

ZONOLITE COMPANY

515 Madison St.

Kansas City 6, Mo.

15/1mena/t

124

St Tolumenaft

OFTPI

ENERAL CATALOG OF COMPLETE BLUMCRAFT LINE AVAILABLE ON REQUEST DPYRIGHT 1962 BY BLUMCRAFT OF PITTSBURGH + 460 MELWOOD STREET, PITTSBURGH 13, PENNSYLVANIA

TTSBURGH

ADJUSTABLE ANCHORING SYSTEMS

SOLVES PROBLEMS OF SECURING RAILINGS TO CONCRETE BY BECOMING AN INTEGRAL PART OF THE STAIR STRUCTURE

- INSURES EXTREME RIGIDITY
- REDUCES COSTLY FIELD LABOR
- ELIMINATES BREAKAGE IN MASONRY
 - ADJUSTABLE FOR POST ALIGNMENT

XY/ILE

MIDWEST ARCHITECT

GENERAL ADVERTISING RATES

	1 Time*	6 Times	12 Times
1 page	\$ 70.00	\$ 60.00	\$ 50.00
1/2 page	50.00	45.00	40.00
Center spread	180.00	160.00	130.00
2nd Cover	90.00	80.00	70.00
3rd Cover	80.00	70.00	60.00
4th Cover	100.00	85.00	70.00
Directory Page	20.00	15.00	10.00

*For Special March Roster Issue, these one time rates apply:

1 page	\$ 90.00	3rd Cover	\$100.00
1/2 page	65.00	4th Cover	125.00
Center spread	225.00	Directory Page	25.00
2nd Cover	110.00		
2nd Cover	110.00		

Color - flat - space rate plus \$50.00 per color.

Color - process - space rate plus \$125.00 - advertiser furnishes separations.

MECHANICAL REQUIREMENTS

Full page . . . 41/2 x 71/2

1/2 page 31/2 × 41/2

Directory page . 234 x 178 - eight ads to a page.

No extra charge for bleed in full, half and center spread pages.

Printing is by offset process - minimum recommended screen - 100. Typesetting, art work and pasteup required will be charged at cost.

ISSUANCE AND CLOSING DATES

Published on the 15th of the month which appears as cover date. Closing date for copy and complete plates - 30 days before month of issue.

COMMISSIONS AND DISCOUNTS

Agency commission: 15 per cent of gross. No cash discount. Bills are due and payable on date of publication. Billing is on a monthly basis.

All advertisers and copy subject to the approval of the Executive Committee of the Kansas City Chapter, A.I.A.

CIRCULATION

Architects, incl	ud	lin	gl	K.	c.	C	ha	pte	ar	me	ml	ber	s		T.		5.							1186
Construction fi	eld	a	nd	re	elo	ite	d	org	an	iz	ati	on	s			1			1					355
School boards -	- f	ive	ec	:01	int	Y	are	ea		5.		1			1	1.17		1.						152
Financial field,	ir	Icl	UC	lin	g	ba	nk	s,	in	su	rar	ice	c	оп	1p (ani	es		etc		2.1			179
Government, lik	ra	rie	s,	p	re	55	an	Id	un	ive	ers	iti	es				1.		5.			-		76
Advertisers .	4			d.		El.			3.	1.	1.	1		20					1.		2.		1	31
Miscellaneous										5.								2.	-			1		50
																			T	oto	1			2029





S. W. Blvd.

Phone VI 2-5672

SEPARATE MECHANICAL BIDDING IS EASY AS A. B. C. A. The owner and/or architect takes bids on Mechanical installation direct from qualified sub-contractors. B. The owner and/or architect incorporates the successful bid under one contract and awards the job to a general contractor for supervision.

•The owner and/or architect is satisfied because he received most construction for his money.





When considering construction consult a registered ard itect and consulting engineer.

ANULINES and MIDWEST ARCHITECT

306 Davidson Building Kansas City 8, Missouri BULK RATE U. S. POSTAGE **PAID** KANSAS CITY, MO. PERMIT NO. 3736

THE OCTAGON M THE AM. INST. OF ARCH. 1735 NEW YORK AVENUE NW WASHINGTON 6. D. C.