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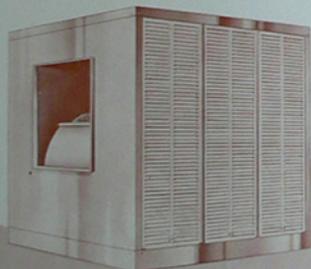
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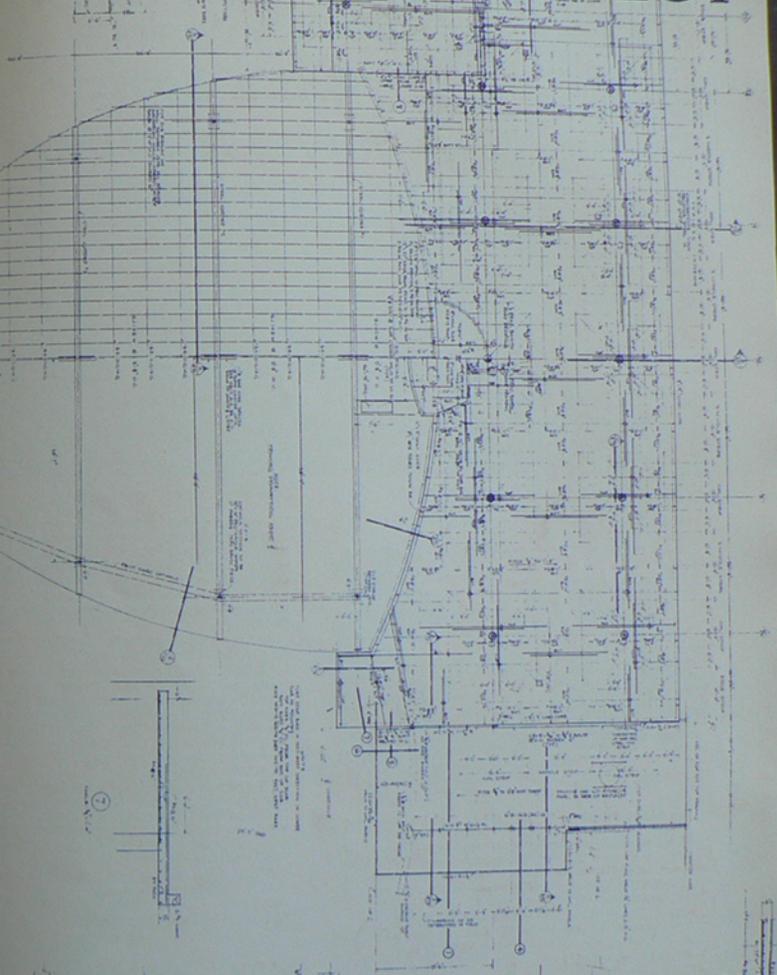
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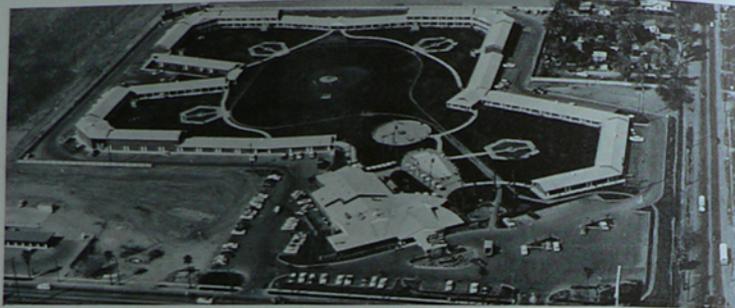
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MAY 1958 VOL. 1, NO. 9



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Official Monthly Publication of the
ARIZONA SOCIETY OF ARCHITECTS
comprised of
CENTRAL ARIZONA CHAPTER and
SOUTHERN ARIZONA CHAPTER of
THE AMERICAN INSTITUTE OF ARCHITECTS

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Per copy: 40 cents

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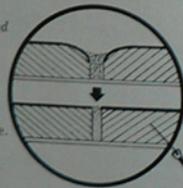
May, 1958



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ARIZONA ARCHITECT

THE PRESIDENTS' PAGE



SOUTHERN ARIZONA CHAPTER

Santry Fuller

Guest column by D. BURR DUBOIS, A.I.A.

SANTRY FULLER has asked me to write the column for this issue of the *Arizona Architect*.

Now someone said that the best way to write an article about architecture was to get all heated up about something. Well, as near as I can think, I'm not mad about anything or at anybody so this may prove to be a poor column, whether it be about architecture or something else. Yet, it may produce the seed of an idea.

Recently my wife and I were in Mazatlan, Mexico, for a few days. We hadn't been there before, so wanted to see the town which, by the way, is delightful. They have there in lieu of taxis one-horse, one-seated, two-wheeled carts. The driver sits on the right end of the seat, which I presume is stationary and he folds up the rest of the seat with its back-rest neatly folding with it so you can climb in from the rear. Then you stand there sort of crouched while he folds the seat back into place and you then sit down, hoping the thing is firmly in place. It is a most novel and interesting arrangement.

We had unsuspectingly chosen an excellent mode of transportation for a good look at the city, because of its leisurely pace. We were also fortunate in having a most pleasant and well-informed driver. He knew the names of the architects and also engineers for the many new, modern buildings we passed. I wondered how many, if any, of our taxi drivers know the names of the architects of the more recent of our buildings here in Tucson, or in Phoenix.

It suggests an opportunity for a little research on the subject. I wonder if a program of education of taxi drivers could do some good, or should we invite them to an A.I.A. meeting, wine them and dine them well, and get them on our side?

By the way, we had a lovely time in Mazatlan.

The officers and members of Southern Arizona Chapter have long been proud of the work that our fellow-director and member, Ed Herreras, has done on the restoration of San Xavier Mission over the last 21 years. Our admiration knows no bounds and we heartily join in this issue's tribute to him.

May, 1958



CENTRAL ARIZONA CHAPTER

David Sholder

Guest column by JAMES W. ELMORE, A.I.A.

PLANNING — a relatively new profession — seems, happily, about to "inherit the earth." In recent years, city after city has come forth with a plan for shaping its future. Kansas City, Detroit, Fort Worth — these and others have developed delightful pictures of what downtown, suburbia and exurbia might be.

In the Valley of the Sun, too, planning activity has gained momentum. The Chambers of Commerce Metropolitan Planning Committee, the "Planning in Our Valley" meetings sponsored by them with our Chapter and Arizona State, the Phoenix Community Council, the Phoenix Growth Committee — all served to emphasize, during 1956 and '57, the urgency of our need for planning. Now, "Plan for Progress, Inc.," and developing joint action of city and county planning departments promise real steps forward.

What will be the end result of our planning? Economic base studies and land use plans can create — through word, model and rendering — a vision of the future city. But realization of the dream requires time and money — it requires overcoming inertia and satisfying vested interests — it requires coordination of public and private activity on broad questions and in many details — it requires elimination of smog, noise and smell, utility lines and billboards, and other nuisances. And it requires — good architecture.

Could the Valley win adoption of a superb regional plan and then see it fail in the execution through bad architecture? A look at Pittsburg's "Golden Triangle" or Philadelphia's "Chinese Wall" area suggests that it could. *Architectural Forum*, in reviewing a number of substantially completed projects of the Urban Renewal Administration, soberly comments: "Architecturally or socially, the results do not match the political ingenuity that made them possible."

We, as architects, must seek to collaborate in every planning activity. And we must accept our prime responsibility in execution of the plan. Unless we can interpret the dreams in architectural terms of warmth and sympathy as well as utility — giving scale and meaning in a satisfying environment — the planning will have been wasted.

Five

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ARIZONA ARCHITECT



In this issue we give you the story of how one of the finest examples of mission architecture on the American continent was preserved and restored.

It is Mission San Xavier del Bac, within nine miles of which the pueblo of Tucson later located in what is now Arizona, U.S.A.

In a special picture essay, and in the words of architects E. D. Herreras, AIA, and Henry O. Jaastad, AIA, we have attempted to convey the significance of this building and the value that lies in its restoration.

"Ed" Herreras' father and grandfather took a keen interest in the missions and worked on them. Ed, himself, considered it the finest kind of birthday present when, on February 26, 1937, he received the call that led to his association with San Xavier's restoration program.

Father Celestine Chinn, O.F.M., whose description of the architecture of San Xavier is printed on these pages, paid tribute to Ed Herreras in these words:

"Mission San Xavier was favored above all other old missions in securing the services of Mr. E. D. Herreras. His work needs no words of commendation, for it will long stand far more eloquently convincing. He surveyed each task not only with the eyes of ability, but with the eyes of love; whatever he did, was done out of admiration and affection for an heirloom that belongs to the family, as it were."

"The love and ability of Mr. E. D. Herreras have achieved a result which places under a debt of gratitude not only the Franciscan Fathers, but future generations of those who are inspired by the romance and beauty of our historic buildings."

The Editor's

PERSPECTIVE

On this page are examples of the art work this mission has inspired. The upper picture is by the artist, Ross Stefan. The original pastel is owned by Edward O. Earl, of San Xavier Materials, Inc., and is reproduced with his kind consent. The lithograph below is by Arthur T. Brown, AIA, whose exceptional artistry in various mediums will become a feature in future issues of *Arizona Architect*.

The painting inside the mission, referred to by Henry Jaastad, is a study in itself. Much of the decoration was painted by natives who applied the pigment with their fingers.

The "rattlesnake design" is prominent in the ornamentation of the mission, and there are whimsical uses of other forms of animal life in evidence. The Indians felt a real kinship with the snake, and their legend explains that after Ignacio Gaona's death following a fall from the mission, his spirit was turned into a rattlesnake and returned to dwell among the people.

High on opposite sides of the facade are a cat and mouse staring at each other. The natives say that when the cat catches the mouse, the world will end. Thanks to the restoration program, that day will be considerably delayed.

There can be no doubt that the mission has greatly affected the lives of countless persons over its 175 plus years of history. By its complete restoration this influence will long continue.

We fully share the sentiments of Father Celestine, and the admiration of those architects and other citizens in Tucson for el arquitecto de la restauración de la Misión, Eleazar D. Herreras, AIA.



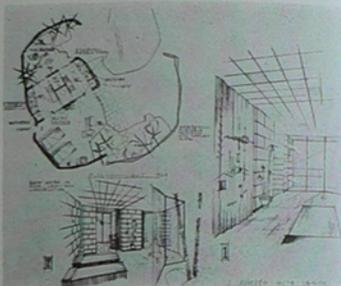
Seven

May, 1938



C. W. Laing (above, left) gives to Bennie M. Gonzales a \$50 check and the \$500 Gonzales Award for presentation to Arizona State School of Architecture. Louis D. Loucks (center), senior AS student, has been assigned the first \$150 of the award by school officials. Presentation was made by Modernfold Doors in cooperation with Laing-Garrett.

Gonzales' winning entry, right, includes an ingenious and attractive use of Modernfold Doors in a master's suite.



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Eight

ARIZONA ARCHITECT



The "First Annual" Honor Awards dinner was held at Arizona State May 8. Approximately 100 members and guests attended.

C. M. Deasy, past president of the Southern California Chapter, gave an entertaining talk that capped a most enjoyable evening.

Taking issue with those who say, "Make no little plans," Deasy said that hundreds of big plans for city development are gathering dust in archives. The small plans are less likely to lose sight of the human beings, "and human beings are what cities are about. Little steps are steps; big programs don't move."

"If we can make cities more livable, we can make cities more lovable. Then cities won't have any more problems," Deasy said.

Honor Awards

Following a gratifying number of entries from the Southern Arizona and Central Arizona Chapters in the awards competition, winners were announced as follows: The Chapter Award in the area of completed work was accepted by James W. Plenart, until recently, designer and supervising architect for Bellante and Clauss, for the firm's Maricopa County office building in Mesa.

Ralph Haver and Associates received an award for their Barrows Furniture Company store in Tucson. Emerson Scholer, AIA, announced the jury's decisions.

Entries in the Awards Competition were received from: Phoenix: Ralph Haver & Associates, Bricker & Busby, Horlbeck & Hickman, Max Kaufman, Edward L. Varney Associates, Lescher & Mahoney, John Sing Tang, Joe B. Wong, and Bellante & Clauss. Tucson: Blanton & Cole, Starkweather & Cain, Carl LeMar John, and Russell Hastings.



May, 1958

CENTRAL CHAPTER HONOR AWARDS



(Upper left, l. to r.) C. M. Deasy, AIA, Los Angeles; Emerson Scholer, AIA, Tucson; and Benjamin Goo, Tempe sculptor and industrial designer, judged entries.

(Lower left) Ralph Haver, AIA, James W. Plenart, and James Elmore. (Above) Student winners (from left) Don Griffen, Shiu Chi Lo, Lance Schwabauer, Bryon G. White, David N. Hunt.

The first annual Weaver and Drover prize, \$100 to enable a student to pursue a special project in architecture of his choice, was given to Lance Schwabauer, sophomore, by Fred Weaver. First annual Central Arizona Chapter, A.I.A. scholarships, \$150 each, for excellence in third and fourth year design, with the work of the entire year considered in the selection were: For third year, Bryon G. White and for fourth year, David N. Hunt. Other student awards, the 8th annual certificates of merit for excellence in design, second and third year, given since 1951, were presented by Dick Britt, 1951 winner, to Don Griffen, sophomore, and Shiu Chi Lo, foreign student from Hong Kong, China.

Bill Laing presented Newcastle Products Company's \$500 to the scholarship fund, Arizona State School of Architecture. \$150 of the fund was presented to Louis D. Loucks, a senior from Winslow, selected by the AS architecture committee. The award was given in the name of B. M. Gonzales, Junior Associate member of the Central Arizona Chapter, A.I.A., and graduate of AS, whose master suite design utilizing Modernfold Doors won first place in the Laing-Garrett-Newcastle Products competition.

James Elmore, master of ceremonies for the awards presentations, announced that the winning entries could be seen in an exhibit at the Phoenix Public Library, Central and McDowell, from May 17-30.

Nine



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Ten

ARIZONA ARCHITECT

CHAPTER NEWS

CENTRAL ARIZONA CHAPTER

Dr. F. M. Hinkhouse, director of the Phoenix Fine Arts Association, and art historian, will be guest speaker at the June 5th meeting, to be held at the ABC Club, 1425 East Ocotillo Rd., at 6:30 p.m. Dr. Hinkhouse's subject will be "The Architect's Approach to Art In Architecture." There will not be regular meetings of the Chapter in July and August.

SOUTHERN ARIZONA CHAPTER

The May 7 meeting was well attended and rewarding. Guests were representatives of the Southwestern Pine Association and Western Pine Association. Representing the latter group, Don Comstock was principal speaker.

Bill Morris, of Southwest Lumber Mills, also gave an interesting talk on lumber grading.

June Meeting

Next month, in lieu of the regular meeting, members of Southern Arizona Chapter and their wives will have a night out at a local guest ranch. Date, place and time will be announced by mail.



Architects and engineers are familiar with concrete terminology. Nevertheless, we believe it is best to begin this series on concrete and testing with the following explanation.

The most commonly used cement for concrete construction is Portland cement. Other kinds include natural cement, aluminate cement, and even asphaltic cement. Portland cement is used to make the common Portland cement concrete.

Laymen often refer to Portland cement concrete as "cement". Actually, Portland cement and water make cement paste; the addition of sand makes mortar, the addition of gravel makes Portland cement concrete, commonly called concrete.

Next month: Concrete Terminology Continued

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By making their components available to all metal fabricators, Blumcraft has provided the element of competitive bidding that is required for public projects as well as for private work.

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NEW WOOD-TRIMMED
ALUMINUM POST

turer has announced that a survey among fabricators in various parts of the country indicates that Tube-line is in a price range of aluminum pipe railing. Their Deluxe line, because of its labor saving adjustable features, is said to be less costly than a quality custom-built railing.

— AIA —

"The evasion of duty will make a coward of any man because without realizing it he destroys his most precious asset — his respect for himself." — B. CARROLL REECE.

ARIZONA ARCHITECT

EDMON F. JACQUES

Edmon F. Jacques, Associate Member of the Central Arizona Chapter of The American Institute of Architects, died April 19th at his home, 1937 E. Willetta.

Mr. Jacques was born in Detroit, Michigan, and received his architectural degree from the University of Michigan. Before coming to Phoenix in 1947, Mr. Jacques practiced architecture in Michigan, California and Tucson.

He was designer of Faith Evangelical Lutheran Church, Bethel Lutheran, Mount of Olives Lutheran, and Aldersgate Methodist Church. His last work was the recently completed All Faith Chapel at the Arizona Boys Ranch, Queen Creek.

Mr. Jacques is survived by his wife, Dorothy; a son, Edmon R. of Phoenix; and two daughters.

The surest test of the civilization of a people — at least, as sure as any — afforded by mechanical art is to be found in their architecture, which presents so noble a field for the display of the grand and the beautiful, and which, at the same time, is so intimately connected with the essential comforts of life.

— William H. Prescott

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Unlike ordinary white roof coatings, Frost Cap will not bleed, fade, chalk or crack even when subjected to temperatures as high as 300°F. It can be applied easily to any surface — masonry, tar, wood, tile, asphalt, asphalt shingles, galvanized metal — even pebble roofs. It forms a tough, water tight coating that lasts for years.



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Fourteen

THIRTY YEARS A DRAFTSMAN

(Frank E. Watson, in *Florida Architect*, describes some more of the "Boys in the Back Room.")

Meticulous Hush, The Quiet One — Really neat. He covers the entire drawing with sketch paper, leaving open only the few square inches on which he is working. He hates to erase anything and does a lot of drawing on the back of the sheet to avoid messing it up in case he has to make a change. This Draftsman got his early training working in a printer's office putting pieces of tissue paper between calling cards.

The Aggressor — This character really bears down — using a 3B pencil. He turns out a real strong black drawing. When told there isn't much useful information on the drawing he invariably retorts, "I know, but it sure makes a good print."

The Clock Watcher or Government Man — I have seen this one with his coat on and his hand on the rolled-up plastic board cover ready to slide it down as the clock strikes five. It is amazing the coordination that can be developed over a number of years in exercising this maneuver. He hasn't been late for supper in twenty years.

The Hot Shot — Fresh out of college where he was a big wheel — this boy knows everything — can do everything — clever sketches — right up to date — has the latest design clichés at his fingertips — falls asleep every night listening to the Reynold's Aluminum Company's record on the Hi-Fi. Considers the drafting room an interlude until he can take the State Board and open his own office. This boy will go far — we hope!

The Griper — The humidity buckles the sheet — too much tooth to the paper — the mechanical department is stupid — what a lousy building — slave wages — nobody tells me anything — those guys up front really must be cleaning up. Now back in Detroit we had ideal working conditions! If anybody knows the whereabouts of this character, we will be glad to pay his fare — one way — back to General Motors.

The Gooferoffer — You have to make allowances for this necessary evil in all production schedules. Bland, urbane, popular with the Boss' daughter. This guy can make more smoke and less fire than anyone in the office. Recently established a new record of thirty-six consecutive days on the same drawing and never changed a line. Always manages to wrangle the schedule sheet.

The Plodder — Works to a schedule — so many hundred lines per day, no matter what the pressure — one speed. He starts methodically in the upper left hand corner of the sheet and working from left to right — he finishes as he goes so that when he reaches the lower right hand corner on goes the title block and he is done. No coffee break — never looks at the World Series — a real square.

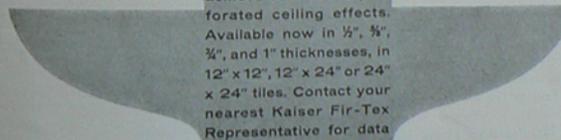
The Boss's Son — No! No! Not that — Anything but that!!!

ARIZONA ARCHITECT

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May, 1958

Kaiser Building — 1924 Broadway, Oakland, California

Fifteen

Tucson's Treasure

By HENRY O. JAASTAD, AIA
Former Mayor of Tucson.

In trying to describe the San Xavier Mission one could well begin with the opening lines of a poem written long years ago by one Ildefonsus:

*Away towards the glowing South Land
'Neath a dome of azure hue,
Near where Santa Cruz rambles
Through the plains 'mid the mountains blue,
Majestic amid the hillocks
Where the cactus luxuriant grows,
Looming up 'gainst the distant mountain
Crowned with mid-summer snouts!
Stands the old church of San Xavier,
Lifting its towers high,
And its cross gleams out to the distance
Where the Rockies touch the sky!*

The San Xavier Mission is the "White Dove of Arizona" or the "Jewel in the Desert" of the various writers who have tried to describe the beauties of the Mission. However, they all agree that it is "the mission of missions," when you analyze the different features of this beautiful building.

The more you study the San Xavier Mission, the more you find. Which is the reason so many writers have given it up after they got fairly well started.

The hemispherical domes over the intersection of the chapels and the nave, the well-proportioned arches in the octagon walls and the flying buttresses from the corners of the tower walls put San Xavier and The Cabasca Missions in a class by themselves. The combination of these features is not found in the missions of the other states.

Every tourist center has certain features peculiar to that locality. Rome has its St. Peter's Cathedral, the Colosseum and the Forum; Pisa its Leaning Tower, Paris its Notre Dame and Eiffel Tower; Germany its Cathedral of Cologne and others; England its Westminster Abbey, etc. And so Tucson has its San Xavier Mission.

The mission, just like the other places mentioned, is visited by thousands of tourists every year and its value to Tucson cannot be measured in dollars and cents.

Just as a prophet is not appreciated in his own home, so this attraction is not fully appreciated by the people of Tucson.

Sixteen

Jewel in the Desert

A whole book could be written on the location of the pictures as well as the pulpit and the baptismal font. The Epistle and Gospel sides of the church as well as the pictures in the chancel and the sanctuary are in every instance located according to the centuries-old traditions of church buildings. This work is a masterpiece in that respect.

Years ago it was quite fashionable to be married at San Xavier and many of the Tucson Pioneers boast that honor.

It has an attraction that you cannot see elsewhere, although it was built by Indian workmen who had hardly ever seen a white man before, under the guidance of the Caona brothers and their assistant, Pedro Bojorquez.

They produced an outstanding building but the design is very much better than the workmanship. The fresco work is fine considering the material they had to work with and the time it was done, but the location of these pictures is the best I have seen anywhere. It is a masterpiece in teaching Christianity by pictures. It takes much study to figure out the true intent of these pictures. To a student of this subject I would recommend Prent Duells' book "Mission Architecture as Exemplified in San Xavier del Bac." It was published by the Arizona Archeological & Historical Society in 1919. That book covers the subject better than any other I know.

This mission, located about 9 miles south of Tucson, is the last of the now existing missions in the so-called Arizona Sonora Chain.

It would be a calamity to let this outstanding building go to ruin. The restoration work that has been started should be kept up whenever needed to keep the building in its present state of repair at all times.

This hope is well-expressed in the closing lines of Ildefonsus' six-page poem describing the different features of this mission:

*Brushed from each shrine and altar
The gathering dust and mold,
May the daily oblation be offered
Which the Prophet has foretold
May its broken cross be uplifted
And its bells more sweetly chime,
And its glory remain untarnished
Until the eve of time.*

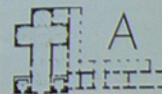
ARIZONA ARCHITECT

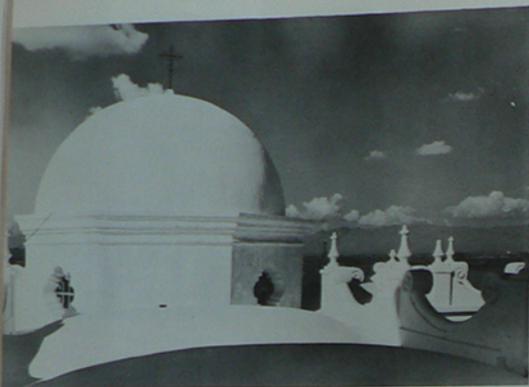
Mission SAN XAVIER del Bac



The "Bells of Christendom" first rang out for the natives of the arid and forbidding Southwest when the Jesuit, Father Eusebio Kino, journeyed there from Mexico in 1691.

Of the 20 missions he founded—and the farthest north—his favorite was Bac ("Place where the water appears.") Here the Sobapuri Indians, later supplanted by Papagos, welcomed the white man, his religion, his livestock, new plants, and the improved way of building he taught—with baked mud bricks.





After the Jesuits were expelled from Spanish territory by royal Spanish decree, the missions were entrusted to the Franciscans, who built the present San Xavier.

Under the direction of the two Gaona brothers, and their assistant, Pedro Bojorquez, the mission was completed in 1797, after 14 years of building.

Legend says Ignacio Gaona was fatally injured in a fall from the building – a possible reason the east tower was never completed.

MISSION SAN XAVIER DEL BAC
 ORIGINAL MISSION FOUNDED BY JESUITS APRIL 1709. SACRED DURING PIMA REVOLT 1751. RESTORED 1922. TAKEN OVER BY FRANCISCANS 1930. RAIDED SAME YEAR BY APACHES. WORK ON PRESENT STRUCTURE BEGAN. ABANDONED IN MEXICAN REVOLT FROM SPAIN 1822. PRIESTS RETURN AFTER GADSDEN PURCHASE 1853. WITHSTOOD EARTHQUAKE 1937. RESTORED 1906.
 AMERICA'S MOST BEAUTIFUL MISSION IN ACTIVE USE TO-DAY.

Despite 160 years of storms, intense heat, marauding Apaches, an earthquake and almost constant use by the devout and the curious, San Xavier stands today an outstanding example of mission architecture.



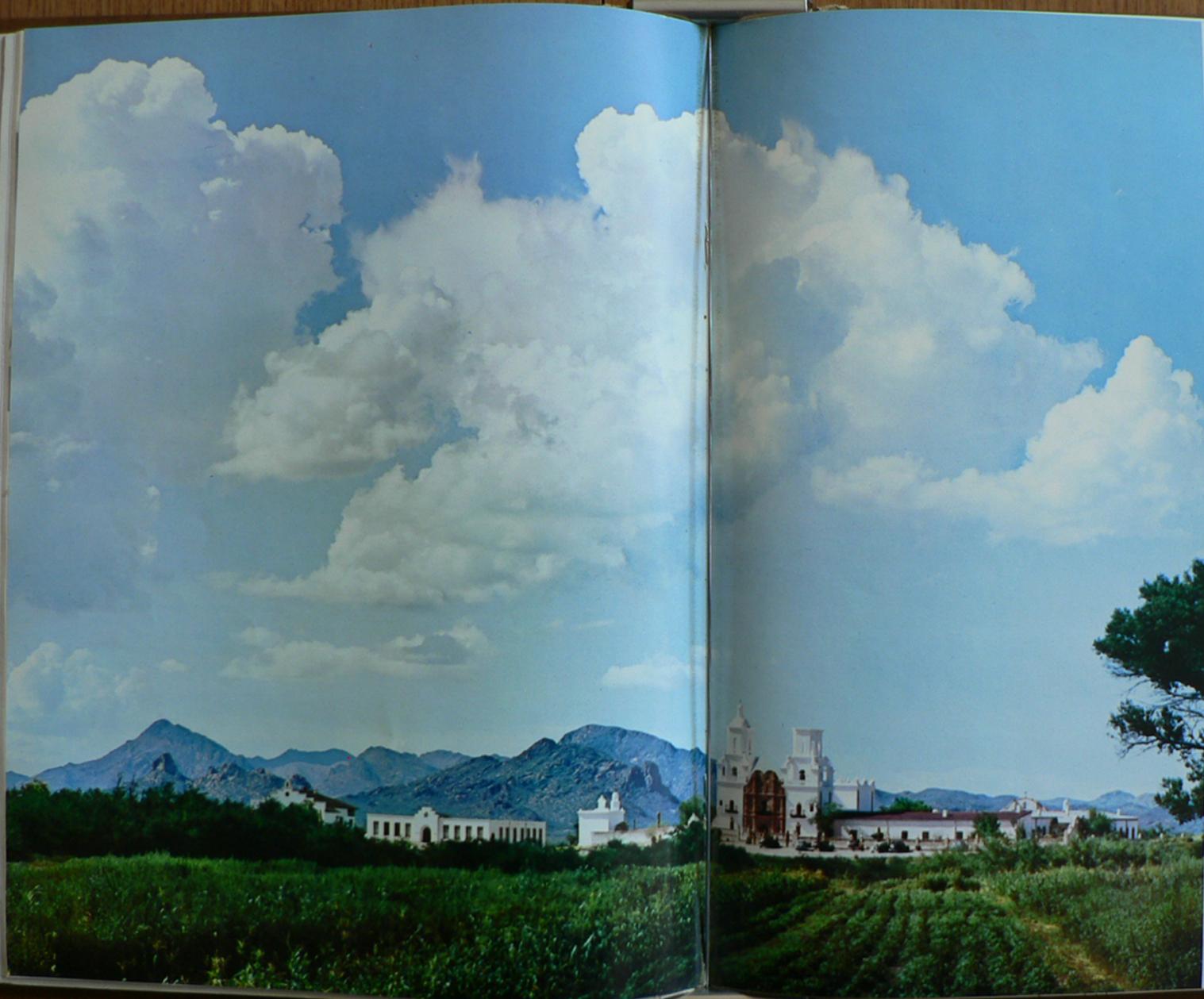
Serious damage to the west tower by lightning in 1937 brought the attention, interest, and devoted services of Eleazar D. Herreras, AIA, to the problems of mission restoration.



Upon the advent of Father Celestine Chinn, O.F.M., as Superior of the Mission in 1949, a dedicated partnership developed with Architect Herreras, with a serious aim to restore all portions of the mission to original and authentic status.

Unrestored, San Xavier could by now have become a hollow shell like nearby Tumacacori. Restored, San Xavier is a living and important spiritual and economic factor – not only for the Indians it has continuously served – but for Tucson and all Arizona.



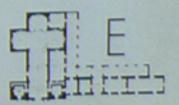


"The White Dove of Arizona" was contrived of limited native materials and built largely by unskilled Indians, whose descendants still live nearby in mud huts.

Yet the mission is the inspiration and the despair of countless artists, poets and authors.

Its beauty is a thing of history . . . of the spirit . . . of form, light and shade.

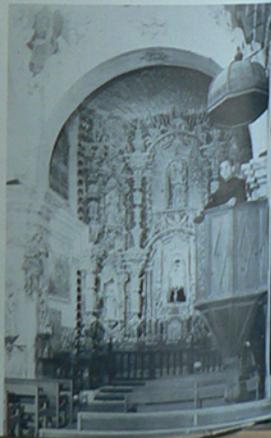
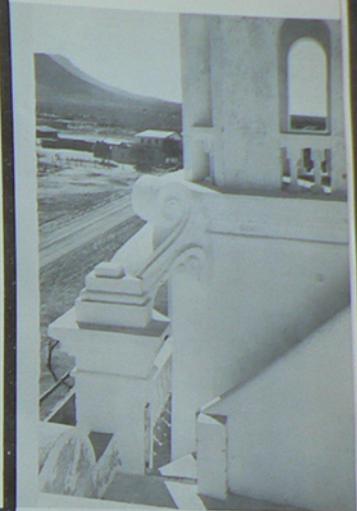
Its authentic and successful restoration is a happy chapter in the romantic and exciting story of the Southwest.





The San Xavier Mission – in its design, its execution by aborigines not fond of work, its unusual and detailed ornamentation and decoration – is a remarkable structure.

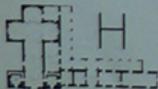
In its very existence, its artistic details and its restoration, there is ample evidence of deep devotion and of a spirit that is the very essence of successful Art and Architecture.





Two modest men — a Tucson architect and a Franciscan friar — have for years dedicated their hearts, their minds, and their considerable talents to the restoration of Mission San Xavier del Bac. Completion of their dream is now within sight, though preservation must always continue.

There are countless others—known and unknown—who must share the credit; notably Bishop Granjon who directed the extensive restoration of 1906-10 which prevented utter decay and made the present restoration possible. Then, as now, some contributed valuable supplies; others, as they were able, gave of their hands and their material means. All gave out of love for that which is beautiful, that which is God.



Moorish, Byzantine, Mexican Renaissance

The Architecture of San Xavier

By REV. CELESTINE CHINN, O.F.M.

(From booklet copyright 1951. Reprinted by permission.)



Authorities acclaim San Xavier the finest example of mission architecture in the United States. The term, Mission Architecture, can be defined as the Spanish Colonial style of Mexico modified by local exigencies of material and labor, and further adapted to the artistic background, aptitude and craftsmanship of the artisans in each particular region to which the style was transplanted.

Although the Moorish and Byzantine influences are the first to make themselves felt, the architecture of San Xavier is immediately derived from the late Renaissance of Mexico.

The church shows elements of all the stages of development, excepting Gothic, through which ecclesiastical architecture passed in the West, particularly in Spain. With these are mingled various

architectural and decorative features from the East, which from an early date permeated every style that arose in Spain. From the standpoint of construction, the use of brick throughout and the pendentives as supports for the dome and vaults are Byzantine in origin, while the high arches and flat vaults are to be traced to the Moorish influence.

In the field of ornamentation, the whimsical treatment of vaults and windows as decorative elements and the wealth of arabesques stem from the style of the Moor; whereas, the simulated patterned marble effects, the glitter of gold, and the frescoes savor of the lavish display and royal splendor of Byzantium. All these diverse elements are fused into a design so closely unified and delightfully harmonious, that it is almost impossible to point out where one style begins and another ends.

CRITIQUE

EDITOR, ARIZONA ARCHITECT:

Regarding the suggested cover design, submitted by Mr. Martinson (March), the philosophy of which is "that the cover for our magazine reflects not the ever changing present but the factor of the classics which is constant . . ."

Perhaps it would be a good thing to remember that the present is past already, and soon it will be the far distant past — soon the remnants of our great culture will be excavated, and what will our successors find? A composite Roman column — the elegant designation for a mixture of the beautiful and simple Greek Ionic and Corinthian, gingered up a little by the imitative Romans. Then we reproduce it by a camera and sat it as a symbol on our Art magazine — a counterfeit of a counterfeit. We should be able to produce something of our own. The art of our age expresses us, and nothing else, if we be true to ourselves.

"Economic considerations" are frequently advanced as an excuse for our unbeautiful structures and the chaotic state of our cities. "Economic considerations" are referred to as a measure of national scale and importance, while in reality it usually means vested

interests of an individual or of a small group who are unconcerned whether their project will be detrimental to the majority of people, unconcerned whether they will gain at the expense of our children's fair share of clean air and sunshine.

Even if it were a question of a sudden influx of masses of people into a country unprepared for them and faced with the necessity of rapid provision of housing, hospitals, schools, etc., there is no justification for the ugliness of the buildings erected. Just as it takes no more time to utter a beautiful word than it takes to utter an ugly one, architecture conceived by a fine mind, will have a fine quality in it.

BRONISLAWA Y. NOYE

The Photographs

All feature photographs in this issue were taken by Phil Stitt, except the following:

Page 9, upper left and right, Arizona State College, Tempe.
 Center Section: Page C, center panel, construction views, Byron Ivancovich; top right, Arizona Pioneers Historical Society; Page E, from color plates of John-Tyler Printing Company; Page F, lower left, Byron Ivancovich; lower center, "Western Ways".
 Page 27, lower right, Arizona Pioneers Historical Society.
 Page 31, left, Arizona Pioneers Historical Society; right, bottom, Byron Ivancovich.
 Page 35, Arizona Pioneers Historical Society.
 Page 37, left, Arizona Pioneers Historical Society.



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THE STRUNK Home utilizes SAN XAVIER "Lino-Wale" block in interesting combination with frame and glass treatments not usually found in the Southwest.

THE PRITCHETT Home is remarkable for its study in modern, low-sloped design. SAN XAVIER "Lino-Wale" block and "Dentone" complement each other and give variations in texture and color.

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ufactured by SAN XAVIER. This block is similar to adobe in size and interesting variations in surface texture, but retains concrete's strength and water resistance. Accents of SAN XAVIER "Chimney Block" terral the sun.

THE SHORT Home creates a "softened" concrete effect at the entrance way by using a screen wall of SAN XAVIER "Chimney Block."

THE ALGIN Home achieves a feeling of "lacy openness" along the patio wall by using SAN XAVIER "Vest Block." This novel effect is repeated in greatly curving tall and short walls in both front and rear and along the pool.

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Twenty-six

ARIZONA ARCHITECT

Problems of Restoration

By E. D. HERRERAS, A.I.A.
 (Chairman, Committee on Preservation of Historic Buildings, Southern Arizona Chapter)

Very few of us have given thought to the problems that had to be overcome by the *Conquistadores* as they journeyed through from *Pimeria Baja* to *Pimeria Alta*. Matters of food, water and intense heat were serious. If they happened to run across any human beings, they would probably have been unfriendly, and they would have spoken a strange language.

To make matters more complex, the *Conquistadores* had to build. Build a place of abode and then a house of worship. This was something! They could not telephone a contractor and ask him to build them a structure yea by yea. They had to do it themselves. This was the original "Do It Yourself" business, only you had nothing to do it with! You had to have some sort of an idea or plan. Alas, no blueprints!

After the idea, came the necessity for materials — timber, masonry units, mortars and so forth. They had no Sweet's catalogue nor any other kind of gismo where they could pick out their pet items to order. They had nothing but Mother Nature and her resources: scant ones at that. But there *she* was, big as all outdoors.

So *el Señor Carpintero* or *el Albañil* would scout around and try to find the wherewithal to make

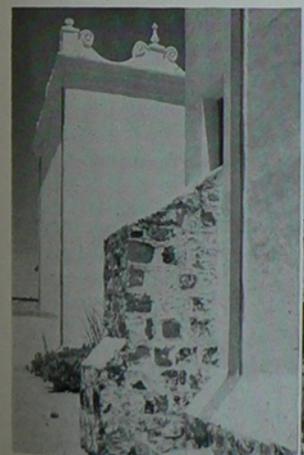


Herreras, Father Celestine

things. Give the boys credit. They made lots of wonderful things out of nothing. Try it sometime and you will have fun. For instance, can you make a natural mortar that will compare very favorably with our modern cement mortar? Or try roofing a building with a guaranteed or bonded roof to last at least twenty years. Our boys built a roof that, according to the records, was done in 1797. That is some one hundred sixty years and it is still standing as weather-proof covering for the "White Dove of the Desert." Roof, sumps and downspouts are all made of masonry and mortar. I could go on and on citing the numerous wonders of construction and "know-how" that these humble soldiers of the cross accomplished with untrained labor and natural resources.

According to Fr. Celestine Chinn, Superior at the mission:

"In 1859, the territory of Arizona was annexed to the diocese of Santa Fe, New Mexico. Shortly thereafter Father Machebeuf, vicar-general of the diocese, visited del Bac and made important and much needed



Left: Roof, sumps and downspouts are of masonry and mortar. Cactus juice in white-wash proved better than casein glue.



Below: The Granjon Gate, built about 1908, as seen before present restoration.

May, 1958

Twenty-seven

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repairs." This is the first known repair to the mission.

The second and best known restoration, due to its thoroughness, was that done by the Right Reverend Henri Granjon, Bishop of Tucson in 1906-1910.

In 1937 the writer was called by the then padre in charge of the mission, Rev. Julian Giradot, O.F.M. Lightning had struck the west tower, demolishing most of the tower lantern and heavily damaging the upper portions of the tower proper. The padre wanted to know first of all if a scaffold could be built to work from. Next, he wanted to know if the tower and the lantern could be repaired. Some "experts" had suggested several bands of exposed iron to hold the drum and dome with some iron rods running hither and yon to further assure the stability of the upper drum of the tower.

The matter was studied and the answer was in the affirmative. Yes, the scaffolding could be built with some stored material that had been donated by local businessmen. The lantern could be restored in its entirety and the rest of the tower made safe and sound by replacing the damaged burnt adobe with local brick and cement mortar. After proper curing, the whole could be plastered and made to look as though nothing had ever happened.

The first step was the erection of a proper scaffold at the uppermost floor of the tower. When completed, careful measurements were made of the existing por-

tion of the lantern. This was no easy task due to the high winds. Full size drawings and details were made to work from. Next, to get someone to act as foreman who could read plans and have knowledge of an *adobero* or *albañil* and at the same time be able to get along with the local Papago Indians. Fortunately, a Tucson carpenter and Jack-of-all-trades was found. Chino Romero took charge and did himself proud in keeping his laborers happy and willing to work.

In order to prevent the recurrence of lightning damage, it was decided to install lightning rods and arresters on the towers, but they had to be placed as inconspicuously as possible. This was done successfully. In digging for the "ground" of the cable from the west tower, workmen uncovered human bones. There was no way of identifying the remains.

The elements and time had worked havoc on the facade of the mission, especially the ten ornate columns. At this time there remained only the two upper short columns and one lower column at the west side of the front. This column was indeed in bad shape. Through the good offices of a couple of public-spirited citizens, an attempt was made to preserve these relics by using a method of "embalming" or a sort of plastic covering of the column. For several months this was the topic of conversation among the "missionites." Nothing ever resulted from this project and the matter was forgotten.



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Thirty

ARIZONA ARCHITECT



Left: Time and the elements were taking their toll before restoration. Note missing columns. Right, top: The facade now. Below: Units of a cast column before installation.

WORKMANSHIP

REQUIRING REASONABLE WORKMANSHIP in all construction is good public policy. Regulations of this office governing contractors licensed by the state require that:

Sec. VI. All work must be done in workmanship manner. Failure to perform in workmanship manner may subject the licensee to suspension or revocation of his license after due notice and hearing.

In order to determine what shall constitute workmanship the following minimum standards are hereby adopted:

1. In all residential new construction or remodeling the minimum standards shall be in accordance with the terms of the Minimum Property Requirements (M. P. R.) of the Federal Housing Administration (F. H. A.) in effect as of December 1, 1957, as they pertain to construction and not to matters of design and site development.
2. In all commercial new construction or remodeling the minimum standards shall be in accordance with the terms of the minimum building requirements as set forth in the Uniform Building Code of the Pacific Coast Building Officials Conference, Volume I, 1955 Edition, as they pertain to construction and not to matters of design and site development, except any portions of said code relating to plumbing, electrical or mechanical refrigeration work shall not be included. Plumbing, electrical and mechanical refrigeration work shall be governed as follows:
 - a. **PLUMBING** - In all commercial new construction or remodeling the minimum standards in the plumbing field shall be in accordance with the terms of the 1955 Edition of the Western Plumbing Officials Uniform Plumbing Code of the Western Plumbing Officials Association.
 - b. **ELECTRICAL** - In all commercial new construction or remodeling the minimum standards in the electrical field shall be in accordance with the terms of the 1956 Edition of the National Electric Code of the National Fire Protection Association.
 - c. **MECHANICAL REFRIGERATION** - In all commercial new construction or remodeling the minimum standards in the mechanical refrigeration field shall be in accordance with the terms of the American Standard Safety Code for Mechanical Refrigeration of the American Society of Refrigerating Engineers A. S. A., B9.1, 1953 Safety Code.
3. In any case where compliance with a portion of the aforementioned minimum standards shall constitute an undue hardship upon a licensee, the licensee, prior to construction, may petition the Registrar of Contractors in writing for permission to deviate from said minimum standards, setting forth the reasons why compliance would create a hardship and the proposed method of doing the work in question. Said petition shall be signed by the contractor and owner or architect. The Registrar shall either grant or deny said petition in writing with a brief statement for the basis of his decision.
4. The term "residential construction" as hereinabove set forth shall include single family dwellings, duplexes and triplexes used for residential purposes. All other construction shall be classed as commercial regardless of use. (As amended.)

The staff of the Registrar of Contractors is prepared and ready to assist in any cases where performance or workmanship may be in question.

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May, 1958

Thirty-one



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ARIZONA ARCHITECT

Thirty-two

Again the matter of preserving and restoring the remaining columns came up and this time, George Chambers enlisted the interest and service of Mr. Harry W. Harpham of the Tucson Warehouse & Transfer Company of Tucson. After studying ways and means of doing the job, he finally evolved the idea of wrapping the lower column with cotton and binding over it with burlap to a thickness which thereafter was encased with plaster of Paris and fibre, a job not unlike a plaster cast. Then some more fibre and plaster to make sure and finally the touchy matter of removing the column from its moorings. This took some doing. After removal, the column was further protected by a wood crate and strapped with light steel bands and the crate was stored in the mission for a period of ten years.

In August, 1949, a new supervisor came to the mission. This man was to spark-plug the restoration and finally complete it to its present status. He is a man small in stature but a giant in vim, vigor and enthusiasm plus his knowledge of mission history and architecture. This human dynamo again called for assistance. After a short conference, it was decided to go ahead and restore as authentically as possible in every respect.

We had a hard time finding the proper material. First came securing a large amount of long mesquite

timber. Every yard of the city was checked to try and find the mesquite vigas. All contractors' yards were gone over with a fine-tooth comb, and any all buildings that were to be demolished or in the process of demolition were checked and inspected in hopes of finding the precious item. In the meantime research was started in order to find out the proper design of the parts to be reproduced. Old photos and sketches by old time artists were studied and blown up for details and observation.

Hewn logs from native mesquite tree, cut in dormancy, are extremely hard and have resisted 160 years of wear. Clay tile replaces original adobe and subsequent wood flooring.



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Thirty-three

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RECOMMENDED SPECIFICATIONS
 Doors shall be flush type hollow core as manufactured by Glen-Mar Door Manufacturing Company, Phoenix, Arizona.

Rails — Top and bottom rails shall both be 10" wide.

Stiles — Shall be a minimum of 3 1/4" wide of soft wood. (A) Matching hardwood edges shall be a minimum of 1/2" after trimming.

Lock-blocks — Shall be 24" long by 4" wide, centered vertically, giving a total width from outer edge of 7 1/4" of solid blocking.

Core — Constructed in two tiers, separated by a 2" intermediate rail. Ribs to be 1/2" thick placed vertically spaced 2" apart, with tapered ends received in mortised rails.

Faces — Shall be of three plies of veneer, hot press bonded, or Don-Loc Maxonite, 1/4" thick and smooth sanded.

Adhesives — To conform to CS 35-56 Type II water resistant bond unless otherwise specified.

Lighter in weight than solid core doors yet heavier and sturdier by far than the standard residential kind, GLEN-COR doors are "easy on the hinges" and are built to withstand the extra abuses of school and commercial traffic. Core design is such that adequate blockage is located where needed for the installation of all types of hardware, opening and closing devices.

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Finally came the design and detailing of the balusters, bolsters and other items. To save time, the crated column was sent to Los Angeles, California, to the J. S. Watkins' studio, in order to try and reproduce the missing facade columns by making a mould and casting it of artificial stone. Fortunately Mr. Watkins, who is well-versed in Spanish and Mission architecture, was commissioned to do the job. He successfully completed the columns and delivered them for erection.

We were then confronted with the task of finding a mason and a carpenter of the old school who could execute the work. Men of skill and patience were available; their work reflects their efforts and love for the old mission.

Conditions around the mission are different than the ordinary environment. It is in the wide open spaces, nine miles south from the City of Tucson. The elements are more intense — the sun feels hotter and the winds are stronger. The materials have to be cured with care and the work seems to take longer. One can imagine what it could have been during the eighteenth century.

The interior electrical illumination had to be done as inconspicuously as possible and without marring the wall paintings. The results were more than pleasing. The old wooden floor, placed over original dirt and adobe tiles, was removed and a new quarry tile flooring, rectangular in shape, was installed.



Builder Pedro Bojorquez "autographed" his handiwork on the sacristy door in 1797. Crude lion heads of the Ganjon restoration have been replaced with earlier-period scrolls. Cracked mud finials are now repaired.

Curiously enough, this change made the acoustics better due to the reflecting qualities of the tile and the great heights, broken by wide, massive cornices of the interior. A little cleaning and retouching of some of the walls was done. Otherwise, the interior remains as originally executed.

The exterior was white-washed with a special lime-water and cactus juice. The latter ingredient proved better than casein glue. The ornate portion of the gabled facade was gone over with a wash made of

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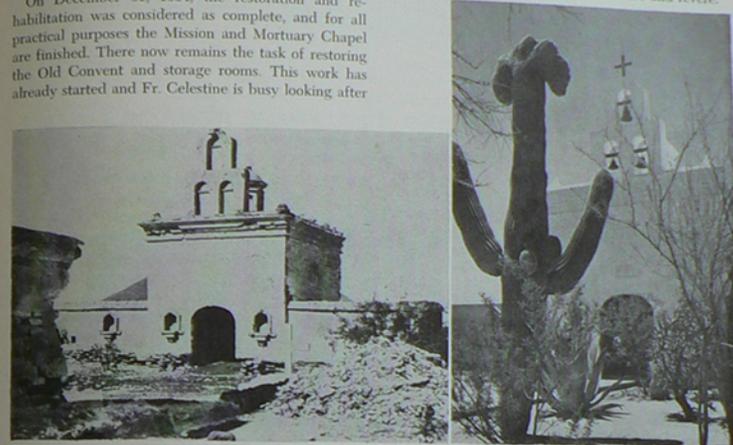
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earth and water, restoring the original color. By chance, one of the plasterers discovered a deposit of this peculiar clayey earth. The decoration of the triangular frieze was freshened. The entire roof and domes were treated with a waterproof liquid.

On December 31, 1954, the restoration and rehabilitation was considered as complete, and for all practical purposes the Mission and Mortuary Chapel are finished. There now remains the task of restoring the Old Convent and storage rooms. This work has already started and Fr. Celestine is busy looking after

the repairs. When this is completed, the restoration will have been fully accomplished.

We now hand this beautiful and best example of Mission Architecture in the North American Continent to future generations to admire and revere.



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IN THE BOOK WORLD

"Buildings For Industry," an Architectural Record Book. (F. W. Dodge Corporation, \$9.75) Reviewed by Robert T. Cox, A.I.A.

This collection of articles which have appeared from time to time in the Record presents a cross-section sampling of the buildings which house the amazing expansion of U. S. industry during the past decade. Obvious, too, is the considerable decentralization that has occurred in the same period.

The articles have been lifted from the magazine and reprinted in this volume without any significant change that I can discover. This is perhaps the greatest shortcoming of the book. While some of the projects are thoroughly covered with both text and graphic presentation, others are represented with but meager text and a few photographs. Making comparisons between buildings is all but impossible. The editors have organized the projects into six types of industrial building, which range from warehouses and utilities buildings, through the gamut of manufacturing from baby food to helicopter plants.

Perhaps the greatest value to be realized in seeing these buildings shown together in one volume is the net effect of the group as a whole. There is a remarkable similarity of structural and architectural concept in the greater portion of them. This is so obvious that one might think a formula with but a few variables had been used to design them. In view of the fact that the buildings shown represent more advanced design, it is surprising that there is not greater use of structural forms that have made themselves so evident in recent buildings of other types. The repetitive bays in most industrial buildings would lend to this type of treatment particularly in the roof structures.

Generally, it appears that industrial buildings represent a fertile field for intelligent and imaginative design.

— AIA —

The following are among those books which may be of special interest to readers of Arizona Architect. They may be ordered from Architect's Book & Magazine Service.

FRANK LLOYD WRIGHT TO 1910 by Grant Manson, with a foreword by Henry-Russell Hitchcock. 250 illustrations, plans and photos 8 1/4 x 10 1/4, 256 pages. \$10.00.

LeCORBUSIER 1946-1952. \$12.50.

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Thirty-eight

ARIZONA ARCHITECT

LIFE AND HUMAN HABITAT by Neutra. Illustrations and sketches of the American homes which Richard Neutra has built, accompanied by excerpts from his essays explaining his theories of architecture. 317 pages, illustrated, diagrams. Single copy \$17.50.

WREN AND HIS PLACE IN EUROPEAN ARCHITECTURE by Sekler. Traces the evolution of Wren's philosophy and artistic practice, making use of much illustrative material, including the drawings by Wren discovered in 1951. 297 pages. (7 page bibl. and footnotes) illus., diagrams. \$12.00.

THE JAPANESE HOUSE AND GARDEN by Yoshida. Domestic architecture of Japan. Over 300 illustrations. 204 pages (bibl.) \$12.50.

ARCHITECTS' HOMES by Robert Winkler. 44 examples of architects' houses from 13 different countries. Each house is presented on 4 to 6 pages with photographs, sketches and ground plans. 224 pages, 9 x 11 1/4, 500 sketches, photographs, and plans. \$10.00.

THE WORKS OF OSCAR NIEMEYER by Stamo Papadaki. The man who changed the face of South America has influenced the architecture of the rest of the world, too. This book traces the progress of Mr. Niemeyer's architecture from 1937 to 1950. 240 pages, 500 illustrations. \$10.00.

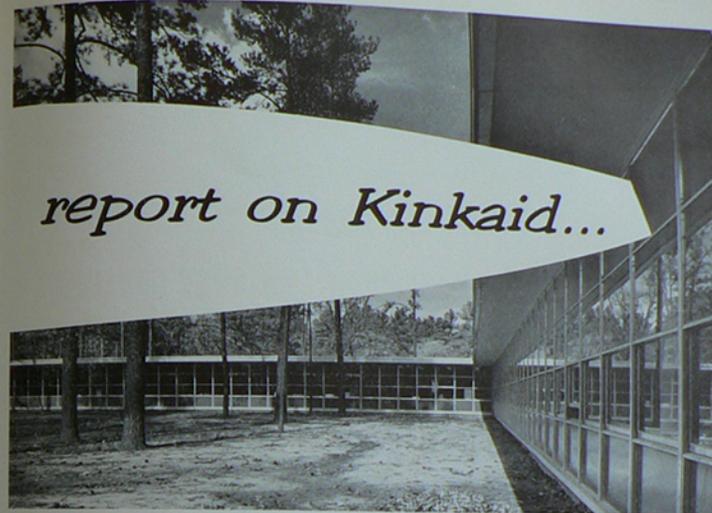
OSCAR NIEMEYER: WORKS IN PROGRESS by Stamo Papadaki. This volume covers the period from 1950 to 1956. 192 pages, 400 illustrations. \$10.00.

WALTER GROPIUS: WORK AND TEAMWORK by S. Giedion. Appreciations by Mies Van Der Rohe and Le Corbusier. Designer, teacher, and leader in the field of architecture, Walter Gropius has been a vigorous force from the early days of the Bauhaus, a force felt both in Europe and in America. 256 pages, 325 illustrations. \$5.00.

MIES VAN DER ROHE by Hilberseimer. His style, use of material, structure, space, development and creation of steel architecture. Detailed descriptions of various types of buildings in Europe and the United States. 199 pages, illustrated. \$9.75.

SCOPE OF TOTAL ARCHITECTURE by Gropius. 207 pages, illustrated, diagrams. \$3.50.

GUIDE TO WESTERN ARCHITECTURE by John Glog. The story of man's structural achievements. His first structural inventions — two upright posts supporting a horizontal member — and the arch. The author has included an appendix containing over two-hundred principal architects — from the Seventh Century B.C. to the Nineteenth Century A.D. — categorized by period with brief notes on their works. \$12.50.



report on Kinkaid...

Four hundred and six

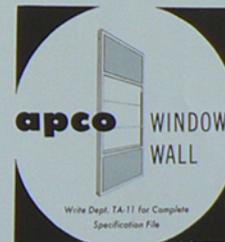
completely assembled units of Apco Window Wall were used in the construction of Kinkaid Preparatory School in Houston. Vertical sliding vents were used to eliminate obstructions at passage level. Insulated sandwich panels, finished in porcelainized steel were used throughout. Manufacture, installation and glazing furnished by Apco-Rubin.

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